

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**Form 10-Q**

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(Mark One)

**Quarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the Quarterly Period Ended March 31, 2023

**Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

Commission File No. 000-25826

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**HARMONIC INC.**  
(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

77-0201147  
(I.R.S. Employer  
Identification Number)

2590 Orchard Parkway  
San Jose, CA 95131  
(408) 542-2500  
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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**Securities registered pursuant to Section 12(b) of the Act:**

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, \$0.001 par value	HLIT	NASDAQ Global Select Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated Filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The number of shares of the registrant's Common Stock, \$0.001 par value, outstanding on May 1, 2023 was 111,355,319.

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## PART I

## FINANCIAL INFORMATION

## ITEM 1. FINANCIAL STATEMENTS

**HARMONIC INC.**  
**CONDENSED CONSOLIDATED BALANCE SHEETS**  
(Unaudited, in thousands, except per share data)

	March 31, 2023	December 31, 2022
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 90,877	\$ 89,586
Accounts receivable, net	88,135	108,427
Inventories	131,642	120,949
Prepaid expenses and other current assets	27,451	26,337
<b>Total current assets</b>	<b>338,105</b>	<b>345,299</b>
Property and equipment, net	38,936	39,814
Operating lease right-of-use assets	24,347	25,469
Goodwill	238,433	237,739
Other non-current assets	63,994	61,697
<b>Total assets</b>	<b>\$ 703,815</b>	<b>\$ 710,018</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Convertible debt, current	\$ 114,204	\$ 113,981
Other debts, current	4,684	4,756
Accounts payable	55,404	67,455
Deferred revenue	65,606	62,383
Operating lease liabilities, current	6,731	6,773
Other current liabilities	59,269	66,724
<b>Total current liabilities</b>	<b>305,898</b>	<b>322,072</b>
Other debts, non-current	11,350	11,161
Operating lease liabilities, non-current	22,872	24,110
Other non-current liabilities	27,909	28,169
<b>Total liabilities</b>	<b>368,029</b>	<b>385,512</b>
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Preferred stock, \$0.001 par value, 5,000 shares authorized; no shares issued or outstanding	—	—
Common stock, \$0.001 par value, 150,000 shares authorized; 111,332 and 109,871 shares issued and outstanding at March 31, 2023 and December 31, 2022, respectively	111	110
Additional paid-in capital	2,384,806	2,380,651
Accumulated deficit	(2,041,476)	(2,046,569)
Accumulated other comprehensive loss	(7,655)	(9,686)
<b>Total stockholders' equity</b>	<b>335,786</b>	<b>324,506</b>
<b>Total liabilities and stockholders' equity</b>	<b>\$ 703,815</b>	<b>\$ 710,018</b>

The accompanying notes are an integral part of these condensed consolidated financial statements.

**HARMONIC INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS**  
(Unaudited, in thousands, except per share data)

	Three Months Ended	
	March 31, 2023	April 1, 2022
Revenue:		
Appliance and integration	\$ 114,794	\$ 112,984
SaaS and service	42,855	34,455
Total net revenue	157,649	147,439
Cost of revenue:		
Appliance and integration	59,748	66,382
SaaS and service	13,847	11,875
Total cost of revenue	73,595	78,257
Total gross profit	84,054	69,182
Operating expenses:		
Research and development	33,509	28,833
Selling, general and administrative	39,282	36,643
Restructuring and related charges	83	1,170
Total operating expenses	72,874	66,646
Income from operations	11,180	2,536
Interest expense, net	(706)	(1,433)
Other income (expense), net	(293)	62
Income before income taxes	10,181	1,165
Provision for income taxes	5,088	2,694
Net income (loss)	\$ 5,093	\$ (1,529)
Net income (loss) per share:		
Basic	\$ 0.05	\$ (0.01)
Diluted	\$ 0.04	\$ (0.01)
Weighted average shares outstanding:		
Basic	110,794	103,994
Diluted	117,758	103,994

The accompanying notes are an integral part of these condensed consolidated financial statements.

**HARMONIC INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)**  
**(Unaudited, in thousands)**

	Three Months Ended	
	March 31, 2023	April 1, 2022
Net income (loss)	\$ 5,093	\$ (1,529)
Change in foreign currency translation adjustments	1,959	(1,702)
Other comprehensive income (loss) before tax	1,959	(1,702)
Provision for (benefit from) income taxes	(72)	63
Other comprehensive income (loss), net of tax	2,031	(1,765)
Total comprehensive income (loss)	<u>\$ 7,124</u>	<u>\$ (3,294)</u>

The accompanying notes are an integral part of these condensed consolidated financial statements.

**HARMONIC INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**  
(Unaudited, in thousands)

	Three Months Ended March 31, 2023					
	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2022	109,871	\$ 110	\$ 2,380,651	\$ (2,046,569)	\$ (9,686)	\$ 324,506
Net income	—	—	—	5,093	—	5,093
Other comprehensive income, net of tax	—	—	—	—	2,031	2,031
Issuance of common stock under award and purchase plans, net	1,461	1	(3,269)	—	—	(3,268)
Stock-based compensation	—	—	7,424	—	—	7,424
Balance at March 31, 2023	111,332	\$ 111	\$ 2,384,806	\$ (2,041,476)	\$ (7,655)	\$ 335,786

	Three Months Ended April 1, 2022					
	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2021	102,959	\$ 103	\$ 2,387,039	\$ (2,087,957)	\$ (3,272)	\$ 295,913
Cumulative effect of ASU 2020-06 adoption	—	—	(32,249)	18,339	—	(13,910)
Balance at January 1, 2022	102,959	103	2,354,790	(2,069,618)	(3,272)	282,003
Net loss	—	—	—	(1,529)	—	(1,529)
Other comprehensive loss, net of tax	—	—	—	—	(1,765)	(1,765)
Issuance of common stock under stock option, award and purchase plans, net	1,877	2	272	—	—	274
Repurchase of common stock	(233)	—	—	(2,141)	—	(2,141)
Stock-based compensation	—	—	7,811	—	—	7,811
Balance at April 1, 2022	104,603	\$ 105	\$ 2,362,873	\$ (2,073,288)	\$ (5,037)	\$ 284,653

The accompanying notes are an integral part of these condensed consolidated financial statements.

**HARMONIC INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(Unaudited, in thousands)

	Three Months Ended	
	March 31, 2023	April 1, 2022
<b>Cash flows from operating activities:</b>		
Net income (loss)	\$ 5,093	\$ (1,529)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation	3,030	3,111
Stock-based compensation	7,424	7,586
Amortization of convertible debt discount	223	297
Amortization of warrant	435	429
Foreign currency remeasurement	1,290	(563)
Deferred income taxes, net	547	627
Provision for expected credit losses and returns	253	1,348
Provision for excess and obsolete inventories	2,027	2,738
Other adjustments	45	77
Changes in operating assets and liabilities:		
Accounts receivable	20,277	(28,479)
Inventories	(10,547)	(11,841)
Other assets	(2,566)	(3,949)
Accounts payable	(12,507)	(12,260)
Deferred revenues	1,721	18,408
Other liabilities	(10,475)	(3,482)
Net cash provided by (used in) operating activities	<u>6,270</u>	<u>(27,482)</u>
<b>Cash flows from investing activities:</b>		
Purchases of property and equipment	(2,331)	(2,438)
Net cash used in investing activities	<u>(2,331)</u>	<u>(2,438)</u>
<b>Cash flows from financing activities:</b>		
Repurchase of common stock	—	(2,141)
Repayment of other debts	(152)	(99)
Proceeds from common stock issued to employees	3,085	2,966
Taxes paid related to net share settlement of equity awards	(6,353)	(2,693)
Net cash used in financing activities	<u>(3,420)</u>	<u>(1,967)</u>
Effect of exchange rate changes on cash and cash equivalents	772	(805)
Net increase (decrease) in cash and cash equivalents	<u>1,291</u>	<u>(32,692)</u>
Cash and cash equivalents at beginning of period	89,586	133,431
Cash and cash equivalents at end of period	<u>\$ 90,877</u>	<u>\$ 100,739</u>
Supplemental schedule of non-cash investing activities:		
Capital expenditures incurred but not yet paid	\$ 881	\$ 1,328

The accompanying notes are an integral part of these condensed consolidated financial statements.

**HARMONIC INC.**  
**NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)**

**NOTE 1: BASIS OF PRESENTATION**

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States ("U.S. GAAP") and applicable rules and regulations of the Securities and Exchange Commission regarding interim financial reporting. Certain information and note disclosures normally included in the financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to such rules and regulations. As such, the information included in this Quarterly Report on Form 10-Q should be read in conjunction with the Company's audited consolidated financial statements and accompanying notes included in our Annual Report on Form 10-K for the year ended December 31, 2022 ("2022 Form 10-K"). The accompanying unaudited condensed consolidated financial statements reflect all adjustments (consisting only of normal recurring adjustments) necessary for a fair presentation of the Company's financial position as of balance sheet dates and its operating results and cash flows for the interim periods presented. Operating results for the three-month period ended March 31, 2023 are not necessarily indicative of the results that may be expected for any subsequent quarter or for the fiscal year ending December 31, 2023.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

The Company's significant accounting policies are described in Note 2 to its audited Consolidated Financial Statements included in the 2022 Form 10-K. There have been no significant changes to these policies during the three months ended March 31, 2023.

**NOTE 2: INVESTMENTS IN EQUITY SECURITIES**

In May 2022, the Company sold its investment in Encoding.com, Inc. for total consideration of up to approximately \$10.7 million. The Company received \$7.8 million in May 2022 and recognized a gain of \$4.2 million. The balance of the consideration of up to approximately \$2.9 million will be payable to the Company within 18 months from the date of sale, subject to certain conditions and indemnity obligations, and will be recorded upon receipt by the Company.

**NOTE 3: CONTRACT ASSETS AND DEFERRED REVENUE**

Contract assets exist when the Company has satisfied a performance obligation but does not have an unconditional right to consideration (e.g., because the entity first must satisfy another performance obligation in the contract before it is entitled to invoice the customer). Deferred revenue represents the Company's obligation to transfer goods or services to a customer for which the Company has received consideration (or an amount of consideration is due) from the customer.

Contract assets and deferred revenue consisted of the following:

<i>(in thousands)</i>	As of	
	March 31, 2023	December 31, 2022
Contract assets	\$ 5,033	\$ 5,580
Deferred revenue	\$ 82,245	\$ 80,471

Contract assets and the non-current portion of deferred revenue are reported as components of "Prepaid expenses and other current assets" and "Other non-current liabilities," respectively, on the condensed consolidated balance sheets.

Revenue recognized during the three months ended March 31, 2023 that was included within the deferred revenue balance at January 1, 2023 was \$21.2 million. Revenue recognized during the three months ended April 1, 2022, that was included within the deferred revenue balance at January 1, 2022 was \$23.5 million.

Remaining performance obligations represent contracted revenues that have not yet been recognized and include deferred revenue and unbilled amounts that will be recognized as revenue in the future. The aggregate balance of the Company's remaining performance obligations as of March 31, 2023 was \$631.6 million, majority of which is expected to be recognized as revenue over the next 12 months and the remainder thereafter.

Refer to Note 10, "Segment Information" for disaggregated revenue information.



**NOTE 4: LEASES**

The components of lease expense are as follows:

<i>(in thousands)</i>	Three Months Ended	
	March 31, 2023	April 1, 2022
Operating lease cost	\$ 1,764	\$ 1,887
Variable lease cost	425	461
<b>Total lease cost</b>	<b>\$ 2,189</b>	<b>\$ 2,348</b>

Supplemental information related to leases are as follows:

<i>(in thousands)</i>	Three Months Ended	
	March 31, 2023	April 1, 2022
Cash paid for amounts included in the measurement of operating lease liabilities	\$ 1,828	\$ 1,916
Right-of-use assets obtained in exchange for operating lease obligations	\$ —	\$ 129

**NOTE 5: OTHER FINANCIAL STATEMENT INFORMATION**

The following tables provide details of selected balance sheet components:

**Accounts receivable, net:**

<i>(in thousands)</i>	As of	
	March 31, 2023	December 31, 2022
Accounts receivable	\$ 90,091	\$ 110,576
Less: allowances for expected credit losses and sales returns	(1,956)	(2,149)
<b>Total</b>	<b>\$ 88,135</b>	<b>\$ 108,427</b>

**Inventories:**

<i>(in thousands)</i>	As of	
	March 31, 2023	December 31, 2022
Finished goods	\$ 72,891	\$ 65,308
Raw materials	49,770	46,081
Work-in-process	3,194	3,251
Service-related spares	5,787	6,309
<b>Total</b>	<b>\$ 131,642</b>	<b>\$ 120,949</b>

**Prepaid expenses and other current assets:**

<i>(in thousands)</i>	As of	
	March 31, 2023	December 31, 2022
Prepaid expenses	\$ 4,649	\$ 5,558
Contract assets	5,033	5,583
Other current assets	17,769	15,196
<b>Total</b>	<b>\$ 27,451</b>	<b>\$ 26,337</b>

**Property and equipment, net:**

<i>(in thousands)</i>	As of	
	March 31, 2023	December 31, 2022
Machinery and equipment	\$ 74,767	\$ 75,589
Capitalized software	29,420	30,588
Leasehold improvements	39,480	39,199
Furniture and fixtures	2,852	2,739
Construction-in-progress	3,210	2,691
Property and equipment, gross	149,729	150,806
Less: accumulated depreciation and amortization	(110,793)	(110,992)
Total	\$ 38,936	\$ 39,814

**Other current liabilities:**

<i>(in thousands)</i>	As of	
	March 31, 2023	December 31, 2022
Accrued employee compensation and related expenses	\$ 22,437	\$ 29,675
Other	36,832	37,049
Total	\$ 59,269	\$ 66,724

**NOTE 6: CONVERTIBLE DEBT**
**2.00% Convertible Senior Notes due 2024 (the “2024 Notes”)**

In September 2019, the Company issued \$115.5 million of the 2024 Notes pursuant to an indenture (the “2024 Notes Indenture”), dated September 13, 2019, by and between the Company and U.S. Bank Trust Company, National Association (as successor in interest to U.S. Bank National Association), as trustee. The 2024 Notes bear interest at a rate of 2.00% per year, payable semi-annually on March 1 and September 1 of each year, beginning March 1, 2020. The 2024 Notes will mature on September 1, 2024, unless earlier repurchased by the Company, redeemed by the Company or converted pursuant to their terms.

The 2024 Notes were initially convertible into cash, shares of the Company’s common stock, or a combination thereof, at the Company’s election, at an initial conversion rate of 115.5001 shares of the Company’s common stock per \$1,000 principal amount of the 2024 Notes (which is equivalent to an initial conversion price of approximately \$8.66 per share). Pursuant to the supplemental indenture entered into by the Company and the trustee during the fourth quarter of the fiscal year ended December 31, 2021, the Company made an irrevocable election to settle the principal amounts of the 2024 Notes solely with cash and may pay or deliver, as the case may be, any conversion value greater than the principal amount in cash, shares of the Company’s common stock or a combination thereof, at the Company’s election. The conversion rate, and thus the effective conversion price, may be adjusted under certain circumstances, including in connection with conversions made following certain fundamental changes or a notice of redemption and under other circumstances, in each case, as set forth in the 2024 Notes Indenture.

The 2024 Notes will be convertible at certain times and upon the occurrence of certain events in the future, in each case, specified in the 2024 Notes Indenture. Further, on or after June 1, 2024, until the close of business on the scheduled trading day immediately preceding the maturity date, holders of the 2024 Notes may convert all or a portion of their 2024 Notes regardless of these conditions.

The 2024 Notes remained convertible as of March 31, 2023, as the last reported sale price of the Company’s common stock for at least 20 trading days during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter was greater than or equal to 130% of the conversion price of the 2024 Notes on each applicable trading day. All \$114.2 million of the net carrying amount of the 2024 Notes outstanding as of March 31, 2023 was classified as a current liability as of that date.

The following table presents the components of the 2024 Notes:

	As of	
	March 31, 2023	December 31, 2022
<i>(in thousands, except for years and percentages)</i>		
Liability:		
Principal amount	\$ 115,500	\$ 115,500
Less: Debt issuance costs, net of amortization	(1,296)	(1,519)
Carrying amount	<u>\$ 114,204</u>	<u>\$ 113,981</u>

The following table presents interest expense recognized for the 2024 Notes:

	Three Months Ended	
	March 31, 2023	April 1, 2022
<i>(in thousands)</i>		
Contractual interest expense	\$ 578	\$ 578
Amortization of debt issuance costs	223	217
Total interest expense recognized	<u>\$ 801</u>	<u>\$ 795</u>

**NOTE 7: STOCKHOLDERS' EQUITY**
**Share-based Compensation Plans**

The following table sets forth the detailed allocation of the share-based compensation expense which was included in the Company's condensed consolidated statements of operations:

<i>(in thousands)</i>	Three Months Ended	
	March 31, 2023	April 1, 2022
Cost of revenue	\$ 850	\$ 527
Research and development expense	2,099	2,536
Selling, general and administrative expense	4,475	4,523
Total	\$ 7,424	\$ 7,586

**Restricted Stock Units:**

<i>(in thousands, except per share amounts)</i>	Number of Shares	Weighted Average Grant-Date Fair Value Per Share
Balance at December 31, 2022	3,499	\$ 8.93
Granted	1,216	12.83
Vested	(1,500)	8.78
Forfeited	(229)	8.83
Balance at March 31, 2023	2,986	\$ 10.45

The Company's stock benefit plans include the 2002 Employee Stock Purchase Plan ("ESPP") and current active stock plans adopted in 1995 and 2002 ("1995 Stock Plan" and "2002 Director Plan", respectively). Refer to Note 13, "Employee Benefit Plans" of Notes to Consolidated Financial Statements in the 2022 Form 10-K for details pertaining to each plan.

As of March 31, 2023, an aggregate of 9,552,296 shares of common stock were reserved for issuance under the 1995 Stock Plan, of which 6,753,467 shares remained available for future grants. As of March 31, 2023, an aggregate of 637,671 shares of common stock were reserved for issuance under the 2002 Director Plan, of which 451,077 shares remained available for future grants.

**Share Repurchase Program**

In February 2022, the Board of Directors authorized the Company to repurchase up to \$100 million of the Company's outstanding shares of common stock through February 2025. The Company is authorized to repurchase, from time-to-time, shares of its outstanding common stock through open market purchases and 10b5-1 trading plans, in accordance with applicable rules and regulations, at such time and such prices as management may decide. The program does not obligate the Company to repurchase any specific number of shares and may be discontinued at any time. The actual timing and amount of repurchases are subject to business and market conditions, corporate and regulatory requirements, stock price, acquisition opportunities and other factors.

There were no repurchase activities during the three months ended March 31, 2023. As of March 31, 2023, approximately \$94.9 million of the share repurchase authorization remained available for repurchases under this program.

**NOTE 8: FAIR VALUE MEASUREMENTS**

The Company's financial instruments not measured at fair value on a recurring basis were as follows:

<i>(in thousands)</i>	March 31, 2023				December 31, 2022			
	Carrying Value	Fair Value			Carrying Value	Fair Value		
		Level 1	Level 2	Level 3		Level 1	Level 2	Level 3
2024 Notes	\$ 114,204	\$ —	\$ 198,892	\$ —	\$ 113,981	\$ —	\$ 181,139	\$ —

The fair value of the Company's convertible notes is influenced by interest rates, the price of the Company's common stock and stock market volatility. The difference between the carrying value and the fair value is primarily due to the spread between the conversion price and the market value of the shares underlying the conversion as of each respective balance sheet date.

**NOTE 9: EARNINGS PER SHARE**

The following table sets forth the computation of the basic and diluted net income (loss) per share:

<i>(in thousands, except per share amounts)</i>	Three Months Ended	
	March 31, 2023	April 1, 2022
<b>Numerator:</b>		
Net income (loss)	\$ 5,093	\$ (1,529)
<b>Denominator:</b>		
Weighted average number of shares outstanding:		
Basic	110,794	103,994
2024 Notes	4,964	—
Restricted stock units	2,000	—
Diluted	117,758	103,994
<b>Net income (loss) per share:</b>		
Basic	\$ 0.05	\$ (0.01)
Diluted	\$ 0.04	\$ (0.01)

The diluted net income per share was materially the same as basic net income per share for the three months ended March 31, 2023. The following table sets forth the potential dilutive shares that were excluded from the computation of diluted net income (loss) per share, because their effects were anti-dilutive:

<i>(in thousands)</i>	Three Months Ended	
	March 31, 2023	April 1, 2022
Convertible debt	—	4,244
Stock options	—	387
Restricted stock units	72	3,066
Stock purchase rights under the ESPP	300	409
Total	372	8,106

**NOTE 10: SEGMENT INFORMATION**

Operating segments are defined as components of an enterprise that engage in business activities for which separate financial information is available and evaluated regularly by the Company's Chief Operating Decision Maker (the "CODM"), which for the Company is its Chief Executive Officer, in deciding how to allocate resources and assess performance. Based on the internal reporting structure, the Company consists of two operating segments: Video and Broadband. The operating segments were determined based on the nature of the products offered. The Video segment provides video processing, production and playout solutions and services worldwide to broadcast and media companies, new streaming media companies, broadband operators, and satellite and telecommunications ("telco") Pay-TV service providers. The Broadband segment provides broadband access solutions and related services to broadband operators globally. A measure of assets by segment is not applicable as segment assets are not included in the discrete financial information provided to the CODM.

The following table provides summary financial information by reportable segment:

<i>(in thousands)</i>	Three Months Ended	
	March 31, 2023	April 1, 2022
<b>Video</b>		
Revenue	\$ 57,298	\$ 65,842
Gross profit	34,614	38,684
Operating income (loss)	(1,426)	3,139
<b>Broadband</b>		
Revenue	\$ 100,351	\$ 81,597
Gross profit	50,290	31,011
Operating income	20,113	8,139
<b>Total</b>		
Revenue	\$ 157,649	\$ 147,439
Gross profit	84,904	69,695
Operating income	18,687	11,278

A reconciliation of the Company's consolidated segment operating income to consolidated income before income taxes is as follows:

<i>(in thousands)</i>	Three Months Ended	
	March 31, 2023	April 1, 2022
Total consolidated segment operating income	\$ 18,687	\$ 11,278
Unallocated corporate expenses <sup>(1)</sup>	(83)	(1,156)
Stock-based compensation	(7,424)	(7,586)
Consolidated income from operations	11,180	2,536
Non-operating expense, net	(999)	(1,371)
<b>Income before income taxes</b>	<b>\$ 10,181</b>	<b>\$ 1,165</b>

(1) Together with stock-based compensation, the Company does not allocate restructuring and related charges to the operating income (loss) for each segment because management does not include this information in the measurement of the performance of the operating segments.

#### Geographic Information

<i>(in thousands)</i>	Three Months Ended	
	March 31, 2023	April 1, 2022
<b>Net revenue<sup>(1)</sup></b>		
United States	\$ 105,741	\$ 86,878
Other countries	51,908	60,561
<b>Total</b>	<b>\$ 157,649</b>	<b>\$ 147,439</b>

(1) Revenue is attributed to countries based on the location of the customer.

#### NOTE 11: COMMITMENTS AND CONTINGENCIES

##### Legal proceedings

From time to time, the Company is involved in lawsuits as well as subject to various legal proceedings, claims, threats of litigation, and investigations in the ordinary course of business, including claims of alleged infringement of third-party patents and other intellectual property rights, commercial, employment, and other matters. The Company assesses potential liabilities in connection with each lawsuit and threatened lawsuits and accrues an estimated loss for these loss contingencies if both of the following conditions are met: information available prior to issuance of the financial statements indicates that it is probable that a liability has been incurred at the date of the financial statements and the amount of loss can be reasonably estimated. While certain matters to which the Company is a party specify the damages claimed, such claims may not represent reasonably probable losses. Given the inherent uncertainties of litigation, the ultimate outcome of these matters cannot be predicted at this time, nor can the amount of possible loss or range of loss, if any, be reasonably estimated.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

The terms “Harmonic,” “Company,” “we,” “us,” “its,” and “our,” as used in this Quarterly Report on Form 10-Q (this “Form 10-Q”), refer to Harmonic Inc. and its subsidiaries and its predecessors as a combined entity, except where the context requires otherwise.

Some of the statements contained in this Quarterly Report on Form 10-Q are forward-looking statements that involve risk and uncertainties. The statements contained in this Quarterly Report on Form 10-Q that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including, without limitation, statements regarding our expectations, beliefs, intentions or strategies regarding the future. In some cases, you can identify forward-looking statements by terminology such as, “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “intends,” “estimates,” “predicts,” “potential,” or “continue” or the negative of these terms or other comparable terminology. These forward-looking statements include, but are not limited to, statements regarding:

- developing trends and demands in the markets we address, particularly emerging markets;
- macroeconomic conditions, including inflation, rising interest rates, volatility and uncertainty in the banking and financial services sector, ongoing global supply chain disruptions, volatile capital markets and foreign currency fluctuations, particularly in certain geographies, and in financial markets;
- the impact of geopolitical events, including the Russia-Ukraine conflict and rising tensions between China and Taiwan, on our business and the markets in which we operate;
- new and future products and services;
- spending of our customers;
- our strategic direction, future business plans and growth strategy;
- industry and customer consolidation;
- expected demand for and benefits of our products and services;
- concentration of revenue sources;
- expectations regarding our Broadband and Video solutions;
- potential future acquisitions and dispositions;
- anticipated results of potential or actual litigation;
- our competitive environment;
- the impact of our restructuring plans;
- the impact of governmental regulations, including with respect to tariffs and economic sanctions;
- anticipated revenue and expenses, including the sources of such revenue and expenses;
- expected impacts of changes in accounting rules;
- expectations regarding the usability of our inventory and the risk that inventory will exceed forecasted demand;
- expectations and estimates related to goodwill and intangible assets and their associated carrying value; and
- use of cash, cash needs and ability to raise capital, including repaying our convertible notes or repurchasing our common stock.

These statements are subject to known and unknown risks, uncertainties and other factors, any of which may cause our actual results to differ materially from those implied by the forward-looking statements. Important factors that may cause actual results to differ from expectations include those discussed in “Risk Factors” in Item 1A of Part II of this Quarterly Report on Form 10-Q. All forward-looking statements included in this Quarterly Report on Form 10-Q are based on information available to us on the date thereof, and we assume no obligation to update any such forward-looking statements.

## ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*You should read the following discussion and analysis of our financial condition and results of operations together with the condensed consolidated financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q. This discussion contains forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those discussed in the section titled "Risk Factors" and in other parts of this Quarterly Report on Form 10-Q.*

### OVERVIEW

We are a leading global provider of (i) versatile and high performance video delivery software, products, system solutions and services that enable our customers to efficiently create, prepare, store, playout and deliver a full range of high-quality broadcast and streaming video services to consumer devices, including televisions, personal computers, laptops, tablets and smart phones and (ii) broadband solutions that enable broadband operators to more efficiently and effectively deploy high-speed internet, for data, voice and video services to consumers' homes.

We classify our total revenue in two categories, "Appliance and integration" and "SaaS and service." The "Appliance and integration" revenue category includes hardware, licenses and professional services and is reflective of non-recurring revenue, while the "SaaS and service" category includes usage fees for our SaaS platform and support service revenue from our appliance-based customers and reflects our recurring revenue stream.

We conduct business in three geographic regions—the Americas, EMEA and APAC—and operate in two segments, Video and Broadband. Our Video business sells video processing, production and playout solutions, and services worldwide to broadband operators and satellite and telco Pay-TV service providers, which we refer to collectively as "service providers," as well as to broadcast and media companies, including streaming media companies. Our Video business infrastructure solutions are delivered either through shipment of our products, software licenses or as SaaS subscriptions. Our Broadband business sells broadband access solutions and related services, including our CableOS software-based broadband access solution, to broadband operators globally.

Historically, our revenue has been dependent upon spending in the cable, satellite, telco, broadcast and media industries, including streaming media. Our customers' spending patterns are dependent on a variety of factors, including but not limited to: economic conditions in the United States and international markets, including the Russia-Ukraine conflict, such as inflation, rising interest rates, potential supply chain disruptions, volatility in capital markets and foreign currency fluctuations; volatility and uncertainty in the banking and financial services sector, access to financing; annual budget cycles of each of the industries we serve; impact of industry consolidations; and customers suspending or reducing spending in anticipation of new products or new standards, new industry trends and/or technology shifts. If our product portfolio and product development plans do not position us well to capture an increased portion of the spending in the markets in which we compete, our revenue may decline. As we attempt to further diversify our customer base in these markets, we may need to continue to build alliances with other equipment manufacturers and suppliers, cloud service providers, content providers, resellers and system integrators, managed services providers and software developers; adapt our products for new applications; take orders at prices resulting in lower margins; and build internal expertise to handle the particular operational, payment, financing and/or contractual demands of our customers, which could result in higher operating costs for us.

More recently, the United States has experienced high levels of inflation, which may result in decreased demand for our products and services, increases in our operating costs including our labor costs, constrained credit and liquidity, reduced customer spending and volatility in financial markets. The Federal Reserve has raised, and may continue to raise, interest rates in response to concerns over inflation risk. There continues to be uncertainty in the changing market and economic conditions, including the possibility of additional measures that could be taken by the Federal Reserve and other government agencies, related to macroeconomic conditions, adverse business conditions and liquidity concerns, or bank failures or instability in the financial services sector, geopolitical disruptions and concerns over inflation risk.

We believe a material and growing portion of the opportunities for our Video business are linked to the industry and our customers (i) continuing to adopt streaming technologies to capture, process and deliver video content to consumers and, increasingly, utilizing public cloud solutions like our VOS SaaS platform to do so; (ii) transforming existing broadcast infrastructure workflows into more flexible, efficient and cost-effective operations running in public clouds; and (iii) for those customers maintaining on-premise video delivery infrastructure, continuing to upgrade and replace aging equipment with next-generation software-based appliances that significantly reduce operational complexity. Our Video business strategy is focused on continuing to develop and deliver products, solutions and services to enable and support these trends.



Our Broadband strategy is focused on continuing to develop and deliver software-based broadband access technologies, which we refer to as our CableOS solutions, to our broadband operator customers. We believe our CableOS software-based broadband access solutions are superior to hardware-based systems and deliver unprecedented scalability, agility and cost savings for our customers. Our CableOS solutions, which can be deployed based on a centralized, DAA or hybrid architecture, enable our customers to migrate to multi-gigabit broadband capacity and the fast deployment of DOCSIS and/or FTTH data, video and voice services. We believe our CableOS solutions resolve space and power constraints in broadband operator facilities, eliminate dependence on hardware upgrade cycles and significantly reduce total cost of ownership, and are helping us become a major player in the broadband access market. In the meantime, we believe our Broadband segment will continue to gain momentum in the marketplace as our customers adopt and deploy our virtualized DOCSIS, CMTS and FTTH solutions and distributed access architectures. We continue to make progress in the development of our CableOS solutions and in the growth of our Broadband business, with expanded commercial deployments, field trials, and customer engagements.

#### CRITICAL ACCOUNTING ESTIMATES

Our unaudited condensed consolidated financial statements and the related notes included elsewhere in this report are prepared in accordance with U.S. GAAP. The preparation of these unaudited condensed consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Our critical accounting estimates are disclosed in our 2022 Annual Report on Form 10-K, as filed with the SEC. There have been no significant changes to these estimates during the three months ended March 31, 2023.

#### ACCOUNTING PRONOUNCEMENTS

Refer to Note 2 to the audited Consolidated Financial Statements included in the 2022 Form 10-K.

#### RESULTS OF OPERATIONS

##### Net Revenue

(in thousands, except percentages)

	Three Months Ended		Change	
	March 31, 2023	April 1, 2022		
Appliance and integration	\$ 114,794	\$ 112,984	\$ 1,810	2 %
as % of total net revenue	73 %	77 %		
SaaS and service	42,855	34,455	8,400	24 %
as % of total net revenue	27 %	23 %		
Total net revenue	\$ 157,649	\$ 147,439	\$ 10,210	7 %

Appliance and integration net revenue increased in the three months ended March 31, 2023, compared to the corresponding period in 2022, primarily due to an increase in our Broadband segment net revenue as a result of increased penetration of existing customers and new customer deployments. The increase was partially offset by a decrease in our Video segment net revenue, which was primarily due to a reduction in sales of appliance products.

SaaS and service net revenue increased in the three months ended March 31, 2023, compared to the corresponding period in 2022, primarily due to increasing SaaS usage from existing customers and activation of new SaaS customers for both segments.

**Gross Profit***(in thousands, except percentages)*

	Three Months Ended		Change	
	March 31, 2023	April 1, 2022		
Gross profit	\$ 84,054	\$ 69,182	\$ 14,872	21 %
as % of total net revenue ("gross margin")	53 %	47 %	6 %	

Our gross margins are dependent upon, among other factors, the proportion of software sales, product mix, supply chain impacts, customer mix, product introduction costs, price reductions granted to customers and achievement of cost reductions.

Our gross margin increased in the three months ended March 31, 2023, compared to the corresponding period in 2022, primarily due to favorable product mix and lower freight costs in the current period.

**Research and Development Expenses***(in thousands, except percentages)*

	Three Months Ended		Change	
	March 31, 2023	April 1, 2022		
Research and development	\$ 33,509	\$ 28,833	\$ 4,676	16 %
as % of total net revenue	21 %	20 %		

Our research and development expenses consist primarily of employee salaries and related expenses, contractors and outside consultants, supplies and materials, equipment depreciation and facilities costs, all of which are associated with the design and development of new products and enhancements of existing products. The research and development expenses are net of French Research and Development ("French R&D") credits.

Research and development expenses increased in the three months ended March 31, 2023, compared to the corresponding period in 2022, primarily due to higher employee compensation costs as a result of headcount increases and annual compensation adjustments to support the growth of our Broadband business and the strategic transition of our Video segment to SaaS business.

**Selling, General and Administrative Expenses***(in thousands, except percentages)*

	Three Months Ended		Change	
	March 31, 2023	April 1, 2022		
Selling, general and administrative	\$ 39,282	\$ 36,643	\$ 2,639	7 %
as % of total net revenue	25 %	25 %		

Selling, general and administrative expenses increased in the three months ended March 31, 2023, compared to the corresponding period in 2022, primarily due to higher employee compensation costs as a result of headcount increases and annual compensation adjustments.

### Restructuring and Related Charges

We have implemented several restructuring plans in the past few years. The goal of these plans is to bring operational expenses to appropriate levels relative to our net revenues, while simultaneously implementing extensive company-wide expense control programs. We account for our restructuring plans under the authoritative guidance for exit or disposal activities. The restructuring and related charges are included in “Cost of revenue” and “Operating expenses-restructuring and related charges” in the condensed consolidated statement of operations.

(in thousands, except percentages)	Three Months Ended		Change	
	March 31, 2023	April 1, 2022		
Cost of revenue	\$ —	\$ (14)	\$ 14	(100)%
Operating expenses				
Restructuring and related charges	83	1,170	(1,087)	(93)%
Total restructuring and related charges	\$ 83	\$ 1,156	\$ (1,073)	(93)%

Restructuring and related charges decreased in the three months ended March 31, 2023, compared to the corresponding period in 2022, primarily due to higher severance and employee benefit costs recorded in conjunction with restructuring activities in the prior period.

### Interest Expense, Net

(in thousands, except percentages)	Three Months Ended		Change	
	March 31, 2023	April 1, 2022		
Interest expense, net	\$ (706)	\$ (1,433)	\$ 727	(51)%

Interest expense, net decreased in the three months ended March 31, 2023, compared to the corresponding period in 2022, primarily due to the repayment of the 4.375% Convertible Senior Notes due 2022 upon their maturity.

### Other Income (Expense), Net

(in thousands, except percentages)	Three Months Ended		Change	
	March 31, 2023	April 1, 2022		
Other income (expense), net	\$ (293)	\$ 62	\$ (355)	(573)%

Other income (expense), net is primarily comprised of foreign exchange gains and losses on cash, accounts receivable and intercompany balances denominated in currencies other than the functional currency of the reporting entity. Change in other income (expense), net in the three months ended March 31, 2023, compared to the corresponding period in 2022, was primarily due to foreign currency exchange losses resulting from the fluctuation of the Euro against the U.S. dollar.

### Income Taxes

(in thousands, except percentages)	Three Months Ended		Change	
	March 31, 2023	April 1, 2022		
Provision for income taxes	\$ 5,088	\$ 2,694	\$ 2,394	89 %

The provision for income taxes increased during the three months ended March 31, 2023, compared to the corresponding period in 2022. The increase was largely driven by the increase in pretax income and the decrease in tax loss and credit carry forwards available in the United States to offset taxable income. The mandatory capitalization and amortization of research and development expenses in the United States was required starting January 1, 2022, by the Tax Cuts and Jobs Act, which has resulted in income tax expense in the United States for both periods.

## Segment Financial Results

(in thousands, except percentages)

	Three Months Ended		Change	
	March 31, 2023	April 1, 2022		
<b>Video</b>				
Revenue	\$ 57,298	\$ 65,842	\$ (8,544)	(13)%
as % of total revenue	36 %	45 %	(9)%	
Gross profit	34,614	38,684	(4,070)	(11)%
Gross margin %	60 %	59 %	1 %	
Operating income	(1,426)	3,139	(4,565)	(145)%
Operating margin %	(2)%	5 %	(7)%	
<b>Broadband</b>				
Revenue	\$ 100,351	\$ 81,597	\$ 18,754	23 %
as % of total revenue	64 %	55 %	9 %	
Gross profit	50,290	31,011	19,279	62 %
Gross margin %	50 %	38 %	12 %	
Operating income	20,113	8,139	11,974	147 %
Operating margin %	20 %	10 %	10 %	
<b>Total</b>				
Revenue	\$ 157,649	\$ 147,439	\$ 10,210	7 %

### Video

Our Video segment net revenue decreased during the three months ended March 31, 2023, compared to the corresponding period in 2022, primarily due to a reduction in sales of appliance products, partially offset by an increase in SaaS and service revenue, reflecting increased usage from existing customers and activation of new SaaS customers. Video segment operating margin decreased during the three months ended March 31, 2023, compared to the corresponding period in 2022, primarily due to the decrease in revenue and increased investments in research and development to support our SaaS business growth.

### Broadband

Our Broadband segment net revenue increased during the three months ended March 31, 2023, compared to the corresponding period in 2022, primarily due to increased penetration of our existing customers and new customer deployments. Our Broadband segment operating margin increased during the three months ended March 31, 2023, compared to the corresponding period in 2022, primarily due to the increase in revenue and margin expansion driven by favorable mix and cost savings in freight and shipping as a result of strategic investments in inventory.

### Liquidity and Capital Resources

We expect to continue to manage our cash from operations effectively, together with deploying cash in working capital for growth. The cash we generate from our operations enables us to fund ongoing operations, our research and development projects for new products and technologies, working capital and other business activities. As part of our cash management strategy, we concentrate cash deposits with large financial institutions subject to the strictest regulations. We continually evaluate our cash needs and may decide it is best to raise additional capital or seek alternative financing sources in order to fund our operations, and the growth of our business, take advantage of unanticipated strategic opportunities, or strengthen our financial position, including through drawdowns on existing or new debt facilities or new financing (debt and equity) funds. In the future, we may enter into other arrangements for potential investments in, or acquisitions of, complementary businesses, services or technologies, which could require us to seek additional equity or debt financing. Additional funds may not be available on terms favorable to us or at all. Conversely, we may also from time to time determine that it is in our best interests to voluntarily repay certain indebtedness early. We believe that our current sources of funds will provide us with adequate liquidity during the 12-month period following March 31, 2023, as well as in the long-term.

### Material Cash Requirements

Our principal uses of cash will include repayments of debt and related interest, purchases of inventory, stock repurchases, payments for payroll, restructuring expenses, and other operating expenses related to the development and marketing of our products, purchases of property and equipment, facility leases, and other contractual obligations for the foreseeable future.

As of March 31, 2023, we had outstanding \$131.5 million in aggregate principal amount of indebtedness, consisting of our 2024 Notes, and other debts, of which \$118.9 million is scheduled to become due in the 12-month period following March 31, 2023. As of March 31, 2023, our total minimum lease payments are \$36.0 million, of which \$5.3 million is due before December 31, 2023.

In February 2022, the Board of Directors authorized us to repurchase, from time to time, up to \$100 million of our outstanding shares of common stock through February 2025, at such time and such prices as management may decide. The program does not obligate us to repurchase any specific number of shares and may be discontinued at any time. As of March 31, 2023, approximately \$94.9 million of the share repurchase authorization remained available for repurchases under this program.

#### Sources and Conditions of Liquidity

Our sources to fund our material cash requirements are predominately from our sales of our products and services and, when applicable, proceeds from debt facilities and debt and equity offerings.

As of March 31, 2023, our principal sources of liquidity consisted of cash and cash equivalents of \$90.9 million, accounts receivable, net, of \$88.1 million, and our \$25.0 million revolving credit facility with JPMorgan Chase Bank, N.A. This credit facility was renewed in October 2022 and will mature on October 28, 2025.

Our cash and cash equivalents of \$90.9 million as of March 31, 2023 consisted of bank deposits held throughout the world, of which \$65.7 million was held outside of the United States. At present, such foreign funds are considered to be indefinitely reinvested in foreign countries to the extent of indefinitely reinvested foreign earnings. In the event funds from foreign operations are needed to fund cash needs in the United States and if U.S. taxes have not already been previously accrued, we may be required to accrue and pay additional U.S. and foreign withholding taxes in order to repatriate these funds.

#### Summary of Cash Flows

The table below sets forth selected cash flow data:

(in thousands)	Three Months Ended	
	March 31, 2023	April 1, 2022
Net cash provided by (used in):		
Operating activities	\$ 6,270	\$ (27,482)
Investing activities	(2,331)	(2,438)
Financing activities	(3,420)	(1,967)
Effect of foreign exchange rate changes on cash and cash equivalents	772	(805)
Net increase (decrease) in cash and cash equivalents	\$ 1,291	\$ (32,692)

#### Operating Activities

Net cash provided by operating activities increased during the first quarter of fiscal 2023 compared to net cash used in operating activities in the first quarter of fiscal 2022, primarily due to higher net income in the first quarter of fiscal 2023 compared to a net loss in the first quarter of fiscal 2022, partially offset by certain unfavorable changes in our working capital mainly due to timing of accounts payable and investments in inventories during the first quarter of fiscal 2023 in comparison to the first quarter of fiscal 2022.

We expect that cash provided by or used in operating activities may fluctuate in future periods as a result of a number of factors, including, but not limited to, instability and uncertainty in the financial services sector, the Russia-Ukraine conflict and related macroeconomic conditions on demand for our offerings, fluctuations in our operating results, shipment linearity, accounts receivable collections performance, inventory and supply chain management, and the timing and amount of compensation and other payments.

#### Investing Activities

Net cash used in investing activities decreased slightly during the first quarter of fiscal 2023 compared to the first quarter of fiscal 2022, primarily due to lower purchases of property and equipment in the first quarter of fiscal 2023.

### *Financing Activities*

Net cash used in financing activities increased during the first quarter of fiscal 2023 compared to the first quarter of fiscal 2022, primarily due to higher payment of tax withholding obligations related to net share settlement of restricted stock units in the first quarter of fiscal 2023, partially offset by lower stock repurchase transactions in the first quarter of fiscal 2023 in comparison to the first quarter of fiscal 2022.

### **ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Market risk represents the risk of loss that may impact our operating results, financial position or liquidity due to adverse changes in market prices and rates. We are exposed to market risk because of changes in interest rates, foreign currency exchange rates, when other currencies held by our subsidiaries are measured against the U.S. dollar, and to changes in the value of financial instruments held by us.

For quantitative and qualitative disclosures about foreign currency exchange risk and interest rate risk affecting the Company, see Item 7A “Quantitative and Qualitative Disclosures about Market Risk” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022. Our exposure related to foreign currency exchange risk and interest rate risk has not changed materially since December 31, 2022.

### **ITEM 4. CONTROLS AND PROCEDURES**

#### **Evaluation of Disclosure Controls and Procedures**

We maintain “disclosure controls and procedures,” as such term is defined in Rule 13a-15(e) and 15d-15(e) under the Exchange Act, that are designed to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Interim Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

In designing and evaluating our disclosure controls and procedures, management recognized that disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, and not absolute, assurance that the objectives of the disclosure controls and procedures are met. Additionally, in designing disclosure controls and procedures, our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible disclosure controls and procedures. The design of any disclosure controls and procedures also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

Based on their evaluation as of the end of the period covered by this Quarterly Report on Form 10-Q, our Chief Executive Officer and Interim Chief Financial Officer have concluded that our disclosure controls and procedures were effective at a reasonable assurance level.

#### **Changes in Internal Control over Financial Reporting**

Our Chief Executive Officer and Interim Chief Financial Officer evaluated the changes in our internal control over financial reporting that occurred during the period covered by this Quarterly Report on Form 10-Q. Based on their evaluation, it is concluded that there had been no change in our internal control over financial reporting during the quarter ended March 31, 2023 that have materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

**PART II**

**OTHER INFORMATION**

**ITEM 1. LEGAL PROCEEDINGS**

From time to time, we are involved in lawsuits as well as subject to various legal proceedings, claims, threats of litigation, and investigations in the ordinary course of business, including claims of alleged infringement of third-party patents and other intellectual property rights, and commercial, employment, and other matters. While certain matters to which we are a party may specify the damages claimed, such claims may not represent reasonably possible losses. Given the inherent uncertainties of litigation, the ultimate outcome of these matters cannot be predicted at this time, nor can the amount of possible loss or range of loss, if any, be reasonably estimated.

An unfavorable outcome on any litigation matters could require us to pay substantial damages, or, in connection with any intellectual property infringement claims, could require us to pay ongoing royalty payments or could prevent us from selling certain of our products. As a result, a settlement of, or an unfavorable outcome on, any of the matters referenced above or other litigation matters could have a material adverse effect on our business, operating results, financial condition and cash flows.

Our industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. From time to time, third parties have asserted, and may in the future assert, exclusive patent, copyright, trademark and other intellectual property rights against us or our customers. Such assertions arise in the normal course of our operations. The resolution of any such assertions and claims cannot be predicted with certainty. Refer to Note 11 of the Notes to the condensed consolidated financial statements in Part 1, Item 1 of this Quarterly Report on Form 10-Q for details on legal proceedings.

**ITEM 1A. RISK FACTORS****Risk Factor Summary**

Our business is subject to significant risks and uncertainties that make an investment in us speculative and risky. Below we summarize what we believe are the principal risk factors but these risks are not the only ones we face, and you should carefully review and consider the full discussion of our risk factors in the section titled “Risk Factors,” together with the other information in this Quarterly Report on Form 10-Q. If any of the following risks actually occurs (or if any of those listed elsewhere in this Quarterly Report on Form 10-Q occur), our business, reputation, financial condition, results of operations, revenue, and future prospects could be seriously harmed. In that event, the market price of our common stock could decline, and you could lose part or all of your investment. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that adversely affect our business.

- We depend on cable, satellite and telco, and broadcast and media industry spending for our revenue and any material decrease or delay in spending in any of these industries would negatively impact our operating results, financial condition and cash flows;
- The loss of one or more of our key customers, a failure to continue diversifying our customer base, or a decrease in the number of larger transactions could harm our business and our operating results;
- We need to develop and introduce new and enhanced products and solutions in a timely manner to meet the needs of our customers and to remain competitive;
- The markets in which we operate are intensely competitive;
- Our future growth depends on a number of video and broadband industry trends;
- Our software-based broadband product initiatives expose us to certain technology transition risks that may adversely impact our operating results, financial condition and cash flows;
- Our operating results are likely to fluctuate significantly and, as a result, may fail to meet or exceed the expectations of securities analysts or investors, causing our stock price to decline;
- We purchase several key components, subassemblies and modules used in the manufacture or integration of our products from sole or limited sources, and we rely on contract manufacturers and other subcontractors;
- We face risks associated with having outsourced engineering resources located in Ukraine; and
- We rely on resellers, value-added resellers and systems integrators for a significant portion of our revenue, and disruptions to, or our failure to develop and manage our relationships with these customers or the processes and procedures that support them could adversely affect our business.

**Risks Related to Our Business and Our Industry**

*We depend on cable, satellite and telco, and broadcast and media industry spending for our revenue and any material decrease or delay in spending in any of these industries would negatively impact our operating results, financial condition and cash flows.*

Our revenue has been derived from worldwide sales to service providers and broadcast and media companies, as well as, in recent years, streaming media companies. We expect that these markets will provide our revenue for the foreseeable future. Demand for our products and solutions will depend on the magnitude and timing of spending by customers in each of these markets for the purpose of creating, expanding or upgrading their systems. These spending patterns are dependent on a variety of factors, including:

- the impact of general economic conditions, actual and projected, including inflation, rising interest rates, lower consumer confidence, volatile capital markets, supply chain disruptions, uncertainty and volatility in the financial services sector and the impact of the Russia-Ukraine conflict, and government and business responses thereto, on the global economy and regional economies;
- access to financing;
- annual budget cycles of customers in each of the industries we serve;
- the impact of industry consolidation;



- customers suspending, reducing or shifting spending due to: (i) new video or broadband industry standards; (ii) industry trends and technology shifts, such as virtualization and cloud-based solutions, and (iii) new products and solutions, such as products and services based on our VOS software platform or our CableOS software-based broadband access solutions;
- delayed or reduced near-term spending as customers transition away from video appliance solutions and adopt new business and operating models enabled by software- and cloud-based solutions, including SaaS unified video processing solutions;
- federal, state, local and foreign government regulation of telco, television broadcasting and streaming media;
- overall demand for communication services and consumer acceptance of new video and data technologies and services;
- competitive pressures, including pricing pressures;
- the impact of fluctuations in currency exchange rates, such as the strengthening of the U.S. dollar; and
- discretionary end-user customer spending patterns.

In the past, specific factors contributing to reduced spending have included:

- uncertainty and deteriorated market conditions regionally and globally due to the effects of the COVID-19 pandemic;
- weak or uncertain economic and financial conditions in the United States or one or more international markets;
- uncertainty related to development of industry technology;
- delays in evaluations of new services, new standards and systems architectures by certain customers;
- emphasis by certain of our customers on generating revenue from existing subscribers or end-customers, rather than from new subscribers or end-customers, through construction, expansion or upgrades;
- a reduction in the amount of capital available to finance projects of our customers and potential customers;
- proposed and completed business combinations and divestitures by our customers and the length of regulatory review of each;
- completion of a new system or significant expansion or upgrade to a system; and
- bankruptcies and financial restructuring of major customers.

In the past, adverse economic conditions in one or more of the geographies in which we offer our products have adversely affected our customers' spending in those geographies and, as a result, our business. During challenging economic times, such as those caused by the effects of the COVID-19 pandemic, Russia-Ukraine conflict and related inflationary pressure, bank insolvency and related uncertainty and volatility in the financial services sector and in tight credit markets, many customers have delayed and reduced and may continue to delay or reduce capital expenditures. This has resulted and could continue to result in reductions in revenue from our products, longer sales cycles, difficulties in collection of accounts receivable, slower adoption of new technologies and increased price competition. If global economic and market conditions, or economic conditions in the United States, Europe or other key markets, remain uncertain or deteriorate, we could experience a material and adverse effect on our business, results of operations, financial condition and cash flows. Additionally, since most of our international revenue is denominated in U.S. dollars, global economic and market conditions may impact currency exchange rates and cause our products to become relatively more expensive to customers in a particular country or region, which could lead to delayed or reduced spending in those countries or regions, thereby negatively impacting our business and financial condition.

In addition, industry consolidation has in the past constrained, and may in the future constrain or delay, spending by our customers. Further, if our product portfolio and product development plans do not position us well to capture an increased portion of the spending of customers in the markets on which we focus, our revenue may decline.

As a result of these various factors and potential issues related to customer spending, we may not be able to maintain or increase our revenue in the future, and our operating results, financial condition and cash flows could be materially and adversely affected.

***The loss of one or more of our key customers, a failure to continue diversifying our customer base, or a decrease in the number of larger transactions could harm our business and our operating results.***

Historically, a significant portion of our revenue has been derived from relatively few customers, due in part to the consolidation of media customers. Sales to our top 10 customers in the three months ended March 31, 2023 accounted for approximately 68% of our net revenue, compared to 70% for the corresponding period in 2022. Although we continue to seek to broaden our customer base by penetrating new markets and further expanding internationally, we expect to see continuing industry consolidation and customer concentration.

During the three months ended March 31, 2023, Comcast accounted for approximately 47% of our net revenue, compared to 31% in the corresponding period in 2022. Additionally, for the three months ended April 1, 2022, Intelsat and Vodafone accounted for approximately 13% and 10% of our net revenue, respectively. Further consolidation in the cable industry could lead to additional revenue concentration for us. The loss of any significant customer, or any material reduction in orders from any other significant customer, or our failure to qualify our new products with any significant customer could materially and adversely affect, either long term or in a particular quarter, our operating results, financial condition and cash flows. Further, while Comcast's election to license our CableOS software contains commitments in license fees to us, if Comcast deploys our solutions more slowly or at a scale that is lower than we anticipate, our operating results, financial condition and cash flows could be materially and adversely effected.

In addition, in most quarters, we are involved in one or more relatively large individual transactions. A decrease in the number of the relatively larger individual transactions in which we are involved in any quarter could materially and adversely affect our operating results for that quarter.

As a result of these and other factors, we may be unable to increase our revenues from some or all of the markets we address, or to do so profitably, and any failure to increase revenues and profits from these customers could materially and adversely affect our operating results, financial condition and cash flows.

***We need to develop and introduce new and enhanced products and solutions in a timely manner to meet the needs of our customers and to remain competitive.***

All of the markets we address are characterized by continuing technological advancement, changes in customer requirements and evolving industry standards. To compete successfully, we must continually design, develop, manufacture and sell new or enhanced products and solutions that provide increasingly higher levels of performance and reliability and meet our customers' changing needs. However, we may not be successful in those efforts if, among other things, our products and solutions:

- are not cost effective;
- are not brought to market in a timely manner;
- are not in accordance with evolving industry standards;
- fail to meet market acceptance or customer requirements; or
- are ahead of the needs of their markets.

If new standards or some of our new products are adopted later than we predict or not adopted at all, or if adoption occurs earlier than we are able to deliver the applicable products or functionality, we risk spending significant research and development time and dollars on products or features that may never achieve market acceptance or that miss the customer demand window and thus do not produce the revenue that a timely introduction would have likely produced.

If we fail to develop and market new and enhanced products and solutions on a timely basis, our operating results, financial condition and cash flows could be materially and adversely affected.

***The markets in which we operate are intensely competitive.***

The markets for our products are extremely competitive and have been characterized by rapid technological change and declining average sales prices in the past.

Our competitors in our Video appliance business are primarily comprised of providers of video delivery and video processing and compression products and solutions, broadcast equipment and solutions providers, and certain network infrastructure providers. Our competitors in our Video SaaS business include companies that offer video delivery and processing SaaS solutions, SaaS video streaming platform providers, and certain public cloud service providers. Our competitors in our Broadband business include a number of suppliers of networking and communications equipment and solutions to broadband service providers.

A number of our principal business competitors in both of our business segments are substantially larger and/or may have access to greater financial, technical, marketing or other resources than we have. Consolidation in the Video industry has led to the acquisition of a number of our historic competitors over the last several years by private equity firms and by AWS. With respect to our Broadband business, certain competitors are substantially larger than us.

In addition, some of our larger competitors may have more long-standing and established relationships with certain domestic and foreign customers. Many of these large enterprises are in a better position to withstand any significant reduction in spending by customers in our markets and may be better able to navigate periods of market uncertainty, such as the uncertainty caused by the effects of the COVID-19 pandemic, Russia-Ukraine conflict, bank insolvency and related uncertainty and volatility in the financial services sector and inflation. They often have broader product lines and market focus, and may not be as susceptible to downturns in a particular market. These competitors may also be able to bundle their products together to meet the needs of a particular customer, and may be capable of delivering more complete solutions than we are able to provide. To the extent large enterprises that currently do not compete directly with us choose to enter our markets by acquisition or otherwise, competition would likely intensify.

Further, some of our competitors have offered, and in the future may offer, their products at lower prices than we offer for our competing products or on more attractive financing or payment terms, which has in the past caused, and may in the future cause, us to lose sales opportunities and the resulting revenue or to reduce our prices in response to that competition. Also, some competitors that are smaller than us have engaged in, and may continue to engage in, aggressive price competition in order to gain customer traction and market share. Reductions in prices for any of our products could materially and adversely affect our operating margins and revenue.

Additionally, certain customers and potential customers have developed, and may continue to develop, their own solutions that may cause such customers or potential customers to not consider our product offerings or to displace our installed products with their own solutions. The growing availability of open source codecs and related software, as well as new server chipsets that incorporate encoding technology, has, in certain respects, lowered the barriers to entry for the video processing industry. The development of solutions by potential and existing customers and the reduction of the barriers to entry to enter the video processing industry could result in increased competition and adversely affect our results of operations and business.

If any of our competitors' products or technologies were to become the industry standard, our business could be seriously harmed. If our competitors are successful in bringing their products to market earlier than us, or if these products are more technologically capable than ours, our revenue could be materially and adversely affected.

***Our future growth depends on a number of video and broadband industry trends.***

Technology, industry and regulatory trends and requirements may affect the growth of our business. These trends and requirements include the following:

- convergence, whereby network operators bundle video, voice and data services to consumers, including mobile delivery options;
- continued strong consumer demand for streaming video services;
- continued adoption of public cloud SaaS platforms to stream video content to consumers, as well as for broadcast infrastructure workflows;
- continued growth in targeted advertising as a key revenue source for video streaming service providers;
- the pace of adoption and deployment of high-bandwidth technology, such as DOCSIS 3.x, DOCSIS 4.0, next generation LTE and fiber-to-the-premises ("FTTP");
- the use of digital video by businesses, governments and educational institutions globally;
- efforts by regulators and governments in the United States and internationally to encourage the adoption of broadband and digital technologies, including 5G broadband networks, as well as to regulate broadband access and delivery;

- the need to develop partnerships with other companies involved in video infrastructure workflow and broadband services;
- the extent and nature of regulatory attitudes towards issues such as network neutrality, competition between operators, access by third parties to networks of other operators, local franchising requirements for telcos to offer video, and other new services, such as mobile video; and
- the outcome of disputes and negotiations between content owners and service providers regarding rights of service providers to store and distribute recorded broadcast content, which outcomes may drive adoption of one technology over another in some cases.

If we fail to recognize and respond to these trends, by timely developing products, features and services required by these trends, we are likely to lose revenue opportunities and our operating results, financial condition and cash flows could be materially and adversely affected.

***Our software-based broadband access product initiatives expose us to certain technology transition risks that may adversely impact our operating results, financial condition and cash flows.***

We believe our CableOS software-based broadband access solutions, supporting centralized, DAA or hybrid configurations, will significantly reduce broadband operator headend costs and increase operational efficiency, and are an important step in operators' transition to all-IP networks. If we are unsuccessful in continuing to innovate and develop and deploy our broadband access solutions in a timely manner, or are otherwise delayed in making our solutions available to our customers, our business may be adversely impacted, particularly if our competitors develop and market similar or superior products and solutions.

We believe our software-based broadband access solutions will continue to replace and make obsolete current CMTS solutions, which is a market our products have historically not addressed, as well as cable edge-QAM products. If demand for our software-based broadband access solutions is weaker than expected, our near and long-term operating results, financial condition and cash flows could be adversely impacted. Moreover, if competitors adapt new broadband industry technology standards into competing broadband access solutions faster than we do, or promulgate a new or competitive architecture for next-generation broadband access solutions that renders our CableOS solution obsolete, our business may be adversely impacted.

The sales cycle for our CableOS solutions tends to be long. For broadband operators, upgrading or expanding network infrastructure is complex and expensive, and investing in a CableOS solution is a significant strategic decision that may require considerable time to evaluate, test and qualify. Potential customers need to ensure our CableOS solution will interoperate with the various components of its existing network infrastructure, including third-party equipment, servers and software. In addition, since we are a relatively new entrant into the CMTS market, we need to demonstrate significant performance, functionality and/or cost advantages with our CableOS solutions that outweigh customer switching costs. If sales cycles are significantly longer than anticipated or we are otherwise unsuccessful in growing our CableOS sales, our operating results, financial condition and cash flows could be materially and adversely affected.

***Our operating results are likely to fluctuate significantly and, as a result, may fail to meet or exceed the expectations of securities analysts or investors, causing our stock price to decline.***

Our operating results have fluctuated in the past and are likely to continue to fluctuate in the future, on an annual and a quarterly basis, as a result of several factors, many of which are outside of our control. Some of the factors that may cause these fluctuations include:

- the level and timing of spending of our customers in the United States, Europe and in other markets;
- economic and financial conditions specific to each of the cable, satellite and telco, and broadcast and media industries, as well as general economic and financial market conditions, including the global economic impacts caused by the effects of the COVID-19 pandemic, the Russia-Ukraine conflict, rising tensions between China and Taiwan and China and the United States, bank insolvency and related uncertainty and volatility in the financial services sector, inflation and government and business responses thereto as well as related supply chain and labor shortage issues;
- changes in market acceptance of and demand for our products or our customers' services or products;
- the timing and amount of orders, especially from large individual transactions and transactions with our significant customers;

- the mix of our products sold and the effect it has on gross margins;
- the timing of revenue recognition, including revenue recognition on sales arrangements and from transactions with significant service and support components, which may span several quarters;
- our transition to a SaaS subscription model for our Video business, which may cause near-term declines in revenue in our Video segment since, unlike Video appliance sales, SaaS revenue is recognized over the applicable subscription term based on service usage;
- the timing of completion of our customers' projects;
- the length of each customer product upgrade cycle and the volume of purchases during the cycle;
- competitive market conditions, including pricing actions by our competitors;
- the level and mix of our domestic and international revenue;
- new product introductions by our competitors or by us;
- uncertainty in the European Union due to unrest or violence in Ukraine that the ongoing military conflict with the Russian Federation have caused, which could adversely affect our results, financial condition and prospects;
- changes in domestic and international regulatory environments affecting our business;
- the evaluation of new services, new standards and system architectures by our customers;
- the cost and timely availability to us of components, subassemblies and modules;
- the mix of our customer base, by industry and size, and sales channels;
- changes in our operating and extraordinary expenses;
- the timing of acquisitions and dispositions by us and the financial impact of such transactions;
- impairment of our goodwill and intangibles;
- the impact of litigation, such as related litigation expenses and settlement costs;
- write-downs of inventory and investments;
- changes in our effective federal tax rate, including as a result of changes in our valuation allowance against our deferred tax assets, and changes in our effective state tax rates, including as a result of apportionment;
- changes to tax rules related to the deferral of foreign earnings and compliance with foreign tax rules;
- the impact of applicable accounting guidance on accounting for uncertainty in income taxes that requires us to establish reserves for uncertain tax positions and accrue potential tax penalties and interest; and
- the impact of applicable accounting guidance on business combinations that requires us to record charges for certain acquisition related costs and expenses and generally to expense restructuring costs associated with a business combination subsequent to the acquisition date.

The timing of deployment of our products by our customers can be subject to a number of other risks, including the availability of skilled engineering and technical personnel, the availability of third-party equipment and services, our customers' ability to negotiate and enter into rights agreements with video content owners that provide our customers with the right to deliver certain video content, and our customers' need for local franchise and licensing approvals.

We often recognize a substantial portion of our quarterly revenue in the last month of the quarter. We establish our expenditure levels for product development and other operating expenses based on projected revenue levels for a specified period, and expenses are relatively fixed in the short term. Accordingly, even small variations in the timing of revenue, particularly from relatively large individual transactions, can cause significant fluctuations in operating results in a particular quarter.

As a result of these factors and other factors, our operating results in one or more future periods may fail to meet or exceed the expectations of securities analysts or investors. In that event, the trading price of our common stock would likely decline.

***We purchase several key components, subassemblies and modules used in the manufacture or integration of our products from sole or limited sources, and we rely on contract manufacturers and other subcontractors.***

Our reliance on sole or limited suppliers, particularly foreign suppliers, and our reliance on contractors for manufacturing and installation of our products, involves several risks, including a potential inability to obtain an adequate supply of required components, subassemblies or modules; reduced control over costs, quality and timely delivery of components, subassemblies or modules; supplier discontinuation of components, subassemblies or modules we require; and timely installation of products. In addition, our financial results may be impacted by tariffs imposed by the United States on goods from other countries and tariffs imposed by other countries on U.S. goods. If any such tariffs are imposed on products or components that we import, including those obtained from a sole supplier or a limited group of suppliers, we could experience reduced revenues or may have to raise our prices, either of which could have an adverse effect on our business, financial condition and operating results.

These risks could be heightened during a substantial economic slowdown because our suppliers and subcontractors are more likely to experience adverse changes in their financial condition and operations during such a period. Further, these risks could materially and adversely affect our business if one of our sole sources, or a sole source of one of our suppliers or contract manufacturers, is adversely affected by a natural disaster or the outbreak of disease, epidemics and other pandemics, such as the COVID-19 pandemic, which has adversely impacted and may continue to adversely impact our supply chain. These risks could also be heightened by geopolitical factors. For example, a number of the components we use in our products are sourced through Taiwan. Deterioration of relations between Taiwan and China and the United States, the resulting actions taken by any of these parties, and other factors affecting the political or economic conditions of Taiwan in the future, could adversely impact our supply chain, international sales and operations. While we expend resources to qualify additional component sources, consolidation of suppliers and the small number of viable alternatives have limited the results of these efforts. Managing our supplier and contractor relationships is particularly difficult during time periods in which we introduce new products and during time periods in which demand for our products is increasing, especially if demand increases more quickly than we expect.

Plexus Services Corp. (“Plexus”), which manufactures our products at its facilities in Malaysia, currently serves as our primary contract manufacturer, and currently accounts for a majority, by dollar amount, of the products that we purchase from our contract manufacturers. Most of the products manufactured by our French and Israeli operations are outsourced to another third-party manufacturer in France and Israel, respectively. From time to time we assess our relationship with our contract manufacturers, and we do not generally maintain long-term agreements with any of our suppliers or contract manufacturers. Our agreement with Plexus has automatic annual renewals, unless prior notice is given by either party, and has been automatically renewed for a term expiring in October 2023.

Difficulties in managing relationships with any of our current contract manufacturers, particularly Plexus, that manufacture our products off-shore, or any of our suppliers of key components, subassemblies and modules used in our products, could impede our ability to meet our customers’ requirements and adversely affect our operating results. An inability to obtain adequate and timely deliveries of our products or any materials used in our products, or the inability of any of our contract manufacturers to scale their production to meet demand, such as the inability of certain of our contract manufacturers to operate at capacity for periods of time during the COVID-19 pandemic, or any other circumstance that would require us to seek alternative sources of supply, had negatively impacted and could continue to negatively affect our ability to ship our products on a timely basis, which could damage relationships with current and prospective customers and harm our business and materially and adversely affect our revenue and other operating results. Furthermore, if we fail to meet customers’ supply expectations, our revenue would be adversely affected and we may lose sales opportunities, both short and long term, which could materially and adversely affect our business and our operating results, financial condition and cash flows. Increases, from time to time, in demand on our suppliers and subcontractors from our customers or from other parties have, on occasion, caused delays in the availability of certain components and products. In response, we may increase our inventories of certain components and products and expedite shipments of our products when necessary. These actions could increase our costs and could also increase our risk of holding obsolete or excess inventory, which, despite our use of a demand order fulfillment model, could materially and adversely affect our business, operating results, financial condition and cash flows.

#### **Operational Risks**

***We rely on resellers, value-added resellers and systems integrators for a significant portion of our revenue, and disruptions to, or our failure to develop and manage our relationships with these customers or the processes and procedures that support them could adversely affect our business.***

We generate a significant percentage of our revenue through sales to resellers, value-added resellers (“VARs”) and systems integrators that assist us with fulfillment or installation obligations. We expect that these sales will continue to generate a significant percentage of our revenue in the future. Accordingly, our future success is highly dependent upon establishing and maintaining successful relationships with a variety of channel partners.

We generally have no long-term contracts or minimum purchase commitments with any of our reseller, VAR or system integrator customers, and our contracts with these parties do not prohibit them from purchasing or offering products or services that compete with ours. Our competitors may provide incentives to any of our reseller, VAR or systems integrator customers to favor their products or, in effect, to prevent or reduce sales of our products. Any of our reseller, VAR or systems integrator customers may independently choose not to purchase or offer our products. Many of our resellers, and some of our VARs and system integrators are small, are based in a variety of international locations, and may have relatively unsophisticated processes and limited financial resources to conduct their business. Any significant disruption of our sales to these customers, including as a result of the inability or unwillingness of these customers to continue purchasing our products, or their failure to properly manage their business with respect to the purchase of, and payment for, our products, or their ability to comply with our policies and procedures as well as applicable laws, could materially and adversely affect our business, operating results, financial condition and cash flows. In addition, our failure to continue to establish or maintain successful relationships with reseller, VAR and systems integrator customers could likewise materially and adversely affect our business, operating results, financial condition and cash flows.

***We face risks associated with having outsourced engineering resources located in Ukraine.***

We outsource a portion of our research and development and product support activities to our third-party partner, GlobalLogic, a Hitachi group company. Through GlobalLogic, we have a significant number of engineering resources located in Kyiv, Ukraine that are dedicated to our Broadband and Video business segments. Political, social and economic instability and unrest or violence in Ukraine from the ongoing military conflict with the Russian Federation have caused, and may continue to cause, disruptions to the business and operations of GlobalLogic, which could slow or delay the development work our outsourced engineering teams are undertaking for us. Any escalation of political tensions, military activity, instability, unrest or conflict could limit or prevent our employees from traveling to, from, or within Ukraine to direct and coordinate our outsourced engineering teams, or cause us to shift all or portions of the development work occurring in Ukraine, and/or cause GlobalLogic to relocate personnel to other locations or countries pursuant to its business continuity plans. Any resulting delays could negatively impact our product development efforts, operating results and our business. In addition, increased costs associated with managing or relocating our outsourced engineering teams in Ukraine, or engaging with alternative engineering resources outside of Ukraine, could negatively impact our operating results and financial condition.

***We may not be able to effectively manage our operations.***

As of March 31, 2023, we had 978 employees in our international operations, representing approximately 72% of our worldwide workforce. In recent years, we have expanded our international operations significantly. Our ability to manage our business effectively in the future, including with respect to any future growth, our operation as both a hardware and increasingly software and SaaS-centric business, the integration of any acquisition efforts such as our acquisition of TVN, and the breadth of our international operations, will require us to train, motivate and manage our employees successfully, to attract and integrate new employees into our overall operations, to retain key employees and to continue to improve and evolve our operational, financial and management systems. There can be no assurance that we will be successful in any of these efforts, and our failure to effectively manage our operations could have a material and adverse effect on our business, operating results, cash flows and financial condition.

***We face risks associated with having facilities and employees located in Israel.***

As of March 31, 2023, we maintained facilities in Israel with a total of 252 employees, or approximately 19% of our worldwide workforce. Our employees in Israel engage in a number of activities, for both our Video and Broadband business segments, including research and development, product development, product management, supply chain management for certain product lines and sales activities.

As such, we are directly affected by the political, economic and military conditions affecting Israel. Any significant conflict involving Israel could have a direct effect on our business or that of our Israeli contract manufacturers, in the form of physical damage or injury, restrictions from traveling or reluctance to travel to from or within Israel by our Israeli and other employees or those of our subcontractors, or the loss of Israeli employees to active military duty. Most of our employees in Israel are currently obligated to perform annual reserve duty in the Israel Defense Forces, and approximately 8% of those employees were called for active military duty in 2022. In the event that more of our employees are called to active duty, certain of our research and development activities may be significantly delayed and adversely affected. Further, the interruption or curtailment of trade between Israel and its trading partners, as a result of terrorist attacks or hostilities, conflicts between Israel and any other Middle Eastern country or organization, or any other cause, could significantly harm our business. Additionally, current or future tensions or conflicts in the Middle East could materially and adversely affect our business, operating results, financial condition and cash flows.

***In order to manage our growth, we must be successful in addressing management succession issues and attracting and retaining qualified personnel.***

Our future success will depend, to a significant extent, on the ability of our management to operate effectively, both individually and as a group. We must successfully manage transition and replacement issues that may result from the departure or retirement of members of our executive management. For example, our Chief Financial Officer recently announced his decision to resign effective as of March 3, 2023 and we have appointed an interim Chief Financial Officer while we conduct a search for a permanent successor. Any significant leadership change or senior management transition involves inherent risks and any failure to ensure timely and suitable replacements and smooth transition could hinder our strategic planning, business execution, and future performance. We cannot provide assurances that any current or future changes of management personnel in the future will not cause disruption to operations or customer relationships or a decline in our operating results.

We are also dependent on our ability to retain and motivate our existing highly qualified personnel, in addition to attracting new highly qualified personnel. Competition for qualified management, technical and other personnel is often intense, particularly in Silicon Valley, Israel and Hong Kong where we have significant research and development activities, and we may not be successful in attracting and retaining such personnel. Competitors and others have in the past attempted, and are likely in the future to attempt, to recruit our employees. While our employees are required to sign standard agreements concerning confidentiality, non-solicitation and ownership of inventions, other than in Israel, we generally do not have non-competition agreements with our personnel. The loss of the services of any of our key personnel, the inability to attract or retain highly qualified personnel in the future or delays in hiring such personnel, particularly senior management and engineers and other technical personnel, could negatively affect our business and operating results. We may need to increase our existing compensation levels in certain markets or for certain roles in response to competition, rising inflation or labor shortages, which may increase our operating costs. Furthermore, a certain portion of our personnel in the United States is comprised of foreign nationals whose ability to work for us depends on obtaining the necessary visas. Our ability to hire and retain foreign nationals in the United States, and their ability to remain and work in the United States, is affected by various laws and regulations, including limitations on the availability of visas. Changes in U.S. laws or regulations affecting the availability of visas have, and may continue to adversely affect, our ability to hire or retain key personnel and as a result may impair our operations.

***Our products include third-party technology and intellectual property, and our inability to acquire new technologies or use third-party technology in the future could harm our business.***

In order to successfully develop and market certain of our planned products, we may be required to enter into technology development or licensing agreements with third parties. Although companies with technology useful to us are often willing to enter into technology development or licensing agreements with respect to such technology, we cannot provide assurances that such agreements may be negotiated on commercially reasonable terms, or at all. The failure to enter, or a delay in entering, into such technology development or licensing agreements, when necessary or desirable, could limit our ability to develop and market new products and could materially and adversely affect our business.

We incorporate certain third-party technologies, including software programs, into our products, and, as noted, intend to utilize additional third-party technologies in the future. In addition, the technologies that we license may not operate properly or as specified, and we may not be able to secure alternatives in a timely manner, either of which could harm our business. We could face delays in product releases until alternative technology can be identified, licensed or developed, and integrated into our products, if we are able to do so at all. These delays, or a failure to secure or develop adequate technology, could materially and adversely affect our business, operating results, financial condition and cash flows.

***Cybersecurity incidents, including data security breaches or computer viruses, could harm our business by disrupting our business operations, compromising our products and services, damaging our reputation or exposing us to liability.***

Cyber criminals and hackers may attempt to penetrate our network security, misappropriate our proprietary information or cause business interruptions. Because the techniques used by such computer programmers to access or sabotage networks change frequently and may not be recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. In the past, we have faced compromises to our network security, and companies are facing additional attacks as workforces have become more distributed as a result of remote and hybrid working arrangements. While we have invested in and continue to update our network security and cybersecurity infrastructure and systems, if our cybersecurity systems fail to protect against unauthorized access, sophisticated cyber-attacks, phishing schemes, ransomware, data protection breaches, computer viruses, denial-of-service attacks and similar disruptions from unauthorized tampering or human error, our ability to conduct our business effectively could be damaged in a number of ways, including:

- our intellectual property and other proprietary data, or financial assets, could be stolen;
- our ability to manage and conduct our business operations could be seriously disrupted;



- defects and security vulnerabilities could be introduced into our product, software and SaaS offerings, thereby damaging the reputation and perceived reliability and security of our products; and
- personally identifiable data of our customers, employees and business partners could be compromised.

Should any of the above events occur, our reputation, competitive position and business could be significantly harmed, and we could be subject to claims for liability from customers, third parties and governmental authorities. Additionally, we could incur significant costs in order to upgrade our cybersecurity systems and remediate damages. Consequently, our business, operating results, financial condition and cash flows could be materially and adversely affected. In addition, our business operations utilize and rely upon numerous third-party vendors, manufacturers, solution providers, partners and consultants, and any failure of such third parties' cybersecurity measures could materially and adversely affect or disrupt our business.

***Our operating results could be adversely affected by natural disasters affecting us or impacting our third-party manufacturers, suppliers, resellers or customers.***

Our corporate headquarters is located in California, which is prone to earthquakes. In addition, climate change is contributing to an increase in erratic weather patterns globally and intensifying the impact of certain types of catastrophes, such as floods, wildfires and droughts. We have employees, consultants and contractors located in regions and countries around the world. In the event that any of our business, sales or research and development centers or offices in the United States or internationally are adversely affected by an earthquake, flood, wildfire or by any other natural disaster, we may sustain damage to our operations and properties, which could cause a sustained interruption or loss of affected operations, and cause us to suffer significant financial losses.

We rely on third-party contract manufacturers for the production of our products. Any significant disruption in the business or operations of such manufacturers or of their or our suppliers could adversely impact our business. Our principal contract manufacturers and several of their and our suppliers and our resellers have operations in locations that are subject to natural disasters, such as severe weather, tsunamis, floods, fires and earthquakes, which could disrupt their operations and, in turn, our operations.

In addition, if there is a natural disaster in any of the locations in which our significant customers are located, we face the risk that our customers may incur losses or sustained business interruption, or both, which may materially impair their ability to continue their purchase of products from us. Accordingly, natural disaster in one of the geographies in which we, or our third-party manufacturers, their or our suppliers or our customers, operate could have a material and adverse effect on our business, operating results, cash flows and financial condition.

## Financial, Transactional and Tax Risks

***We may need additional capital in the future and may not be able to secure adequate funds at all or on terms acceptable to us.***

We engage in the design, development and manufacture and sale of a variety of video and broadband products and system solutions, which has required, and will continue to require, significant research and development expenditures.

We are monitoring and managing our cash position in light of ongoing market conditions due to the effects of COVID-19, volatility and uncertainty in the banking and financial services sector, the Russia-Ukraine conflict and related macroeconomic conditions. We believe that our existing cash of approximately \$90.9 million at March 31, 2023 will satisfy our cash requirements for at least the next 12 months. However, we may need to raise additional funds to take advantage of presently unanticipated strategic opportunities, satisfy our other cash requirements from time to time, or strengthen our financial position. Our ability to raise funds may be adversely affected by a number of factors, including factors beyond our control, such as weakness in the economic conditions in markets in which we sell our products, bank failures and continued uncertainty in financial, capital and credit markets. There can be no assurance that equity or debt financing will be available to us on reasonable terms, if at all, when and if it is needed.

We may raise additional financing through public or private equity or convertible debt offerings, debt financings, or corporate partnership or licensing arrangements. To the extent we raise additional capital by issuing equity securities or convertible debt, our stockholders may experience dilution, and any new equity or convertible debt securities we issue could have rights, preferences, and privileges superior to holders of our common stock. Further, volatility in equity capital markets may adversely affect market prices of our common stock. This may materially and adversely affect our ability to raise additional capital through public or private equity offerings. To the extent that we raise additional funds through collaboration and licensing arrangements, it may be necessary to relinquish some rights to our technologies or products, or grant licenses on terms that are not favorable to us. To the extent we raise capital through debt financing arrangements, we may be required to pledge assets or enter into covenants that could restrict our operations or our ability to incur further indebtedness and the interest on such debt may adversely affect our operating results. Further, rising interest rates and tightening credit markets may reduce our access to debt financing, which may adversely affect our future business plans and expected growth, and would increase the cost of long-term fixed rate and short-term variable rate borrowings, which could reduce our earnings.

If adequate capital is not available, or is not available on reasonable terms, when needed, we may not be able to take advantage of acquisition or other market opportunities, to timely develop new products, or to otherwise respond to competitive pressures.

***Servicing our debt requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our substantial debt.***

Our ability to make scheduled payments of the principal of, to pay interest on or to refinance our indebtedness, including our 2.00% Convertible Senior Notes due in 2024 (the "Notes"), or to make cash payments in connection with any conversion of the Notes or in connection with any repurchase of Notes upon the occurrence of a fundamental change before the maturity date at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus any accrued and unpaid interest thereon, as set forth in the indenture governing the Notes, depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not continue to generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness, including the Notes, will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations, including the Notes.

In addition, our ability to repurchase the Notes or to pay cash upon conversions of the Notes or at their maturity may be limited by law, regulatory authority, or agreements governing our future indebtedness. Our failure to repurchase the Notes at a time when the repurchase is required by the indenture governing the Notes or to pay cash upon conversions of the Notes or at their maturity as required by the indenture governing the Notes would constitute a default under the indenture. A default under the indenture, or the fundamental change itself, could also lead to a default under agreements governing our future indebtedness. Moreover, the occurrence of a fundamental change under the indenture governing the Notes could constitute an event of default under any such agreement. If the repayment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the Notes or make cash payments upon conversions thereof.

***Despite our current debt levels, we may still incur substantially more debt or take other actions which would intensify the risks discussed above.***

Despite our current consolidated debt levels, we and our subsidiaries may be able to incur substantial additional debt in the future, subject to the restrictions contained in our debt instruments, some of which may be secured debt. We are not restricted under the terms of the indenture governing the Notes from incurring additional debt, securing existing or future debt, recapitalizing our debt or taking a number of other actions that are not limited by the terms of the indenture governing the Notes that could have the effect of diminishing our ability to make payments on our debt (including the Notes) when due. In addition, the Credit Agreement we entered into with JPMorgan Chase Bank, N.A., as lender, and Harmonic International GmbH, as co-borrower, on December 19, 2019 and most recently amended in October 2022, permits us to incur certain additional indebtedness and grant certain liens on our assets that could intensify the risks discussed above.

***The conditional conversion feature of the Notes, if triggered, may adversely affect our financial condition and operating results.***

In the event the conditional conversion feature of the Notes is triggered, holders of Notes will be entitled under the indenture governing the Notes to convert the Notes at any time during specified periods at their option. During the fourth quarter of the fiscal year ended December 31, 2021, the Company made an irrevocable election under the terms of the indenture governing the Notes to settle the principal portion of the Notes solely with cash and may pay or deliver, as the case may be, any conversion value greater than the principal amount in cash, shares of common stock or a combination thereof, at the Company's election. Accordingly, if one or more holders elect to convert their Notes, we would be required to settle the principal portion of our conversion obligation through the payment of cash, which could adversely affect our liquidity. In addition, even if holders do not elect to convert their Notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the Notes as a current rather than long-term liability, which would result in a material reduction of our net working capital.

***We have made, and may continue to make, acquisitions, and any acquisition could disrupt our operations, cause dilution to our stockholders and materially and adversely affect our business, operating results, cash flows and financial condition.***

As part of our business strategy, from time to time we have acquired, and we may continue to acquire, businesses, technologies, assets and product lines that we believe complement or expand our existing business. Acquisitions involve numerous risks, including the following:

- unanticipated costs or delays associated with an acquisition;
- difficulties in the assimilation and integration of acquired operations, technologies and/or products;
- potential disruption of our business and the diversion of management's attention from the regular operations of the business during the acquisition process;
- the challenges of managing a larger and more geographically widespread operation and product portfolio after the closing of the acquisition;
- potential adverse effects on new and existing business relationships with suppliers, contract manufacturers, resellers, partners and customers;
- compliance with regulatory requirements, such as local employment regulations and organized labor in France;
- risks associated with entering markets in which we may have no or limited prior experience;
- the potential loss of key employees of acquired businesses and our own business as a result of integration;
- difficulties in bringing acquired products and businesses into compliance with applicable legal requirements in jurisdictions in which we operate and sell products;
- impact of known potential liabilities or unknown liabilities, including litigation and infringement claims, associated with companies we acquire;
- substantial charges for acquisition costs or for the amortization of certain purchased intangible assets, deferred stock compensation or similar items;
- substantial impairments to goodwill or intangible assets in the event that an acquisition proves to be less valuable than the price we paid for it;

- difficulties in establishing and maintaining uniform financial and other standards, controls, procedures and policies;
- delays in realizing, or failure to realize, the anticipated benefits of an acquisition; and
- the possibility that any acquisition may be viewed negatively by our customers or investors or the financial markets.

Competition within our industry for acquisitions of businesses, technologies, assets and product lines has been, and is likely to continue to be, intense. As such, even if we are able to identify an acquisition that we would like to consummate, we may not be able to complete the acquisition on commercially reasonable terms or because the target chooses to be acquired by another company. Furthermore, in the event that we are able to identify and consummate any future acquisitions, we may, in each of those acquisitions:

- issue equity securities which would dilute current stockholders' percentage ownership;
- incur substantial debt to finance the acquisition or assume substantial debt in the acquisition;
- incur significant acquisition-related expenses;
- assume substantial liabilities, contingent or otherwise; or
- expend significant cash.

These financing activities or expenditures could materially and adversely affect our operating results, cash flows and financial condition or the price of our common stock. Alternatively, due to difficulties in the capital or credit markets at the time, we may be unable to secure capital necessary to complete an acquisition on reasonable terms, or at all. Moreover, even if we were to obtain benefits from acquisitions in the form of increased revenue and earnings per share, there may be a delay between the time the expenses associated with an acquisition are incurred and the time we recognize such benefits.

In addition to the risks outlined above, if we are unable to successfully receive payment of any significant portion of our existing French R&D credit receivables from the French authority as expected, or are unable to successfully apply for or otherwise obtain the financial benefit of new French R&D credits in future years, our ability to achieve the anticipated benefits of the acquisition as well as our business, operating results and financial condition could be adversely affected.

As of March 31, 2023, we had approximately \$238.4 million of goodwill recorded on our balance sheet associated with prior acquisitions. In the event we determine that our goodwill is impaired, we would be required to write down all or a portion of such goodwill, which could result in a material non-cash charge to our results of operations in the period in which such write-down occurs.

If we are unable to successfully address one or more of these risks, our business, operating results, financial condition and cash flows could be materially and adversely affected.

***We may sell one or more of our product lines, from time to time, as a result of our evaluation of our products and markets, and any such divestiture could adversely affect our continuing business and our expenses, revenues, results of operation, cash flows and financial position.***

We periodically evaluate our various product lines and may, as a result, consider the divestiture of one or more of those product lines. We have sold product lines in the past, and any prior or future divestiture could adversely affect our continuing business and expenses, revenues, results of operations, cash flows and financial position.

Divestitures of product lines have inherent risks, including the expense of selling the product line, the possibility that any anticipated sale will not occur, delays in closing any sale, the risk of lower-than-expected proceeds from the sale of the divested business, unexpected costs associated with the separation of the business to be sold from the seller's information technology and other operating systems, and potential post-closing claims for indemnification or breach of transition services obligations of the seller. Expected cost savings, which are offset by revenue losses from divested businesses, may also be difficult to achieve or maximize due to the seller's fixed cost structure, and a seller may experience varying success in reducing fixed costs or transferring liabilities previously associated with the divested business.

***The nature of our business requires the application of complex revenue and expense recognition rules and the current legislative and regulatory environment affecting generally accepted accounting principles is uncertain. Significant changes in current principles could affect our financial statements going forward and changes in financial accounting standards or practices may cause adverse, unexpected financial reporting fluctuations and harm our operating results.***

United States generally accepted accounting principles (“U.S. GAAP”) are subject to interpretation by the Financial Standards Accounting Board (“FASB”), the SEC and various bodies formed to promulgate and interpret appropriate accounting principles. We are also subject to evolving rules and regulations of the countries in which we do business. Changes to accounting standards or interpretations thereof may result in different accounting principles under U.S. GAAP that have a significant effect on our reported financial results and require us to incur costs and expenses in order to comply with the updated standards or interpretations.

In addition, we have in the past and may in the future need to modify our customer contracts, accounting systems and processes when we adopt future or proposed changes in accounting principles. The cost and effect of these changes may negatively impact our results of operations during the periods of transition.

***Fluctuations in our future effective tax rates could affect our future operating results, financial condition and cash flows.***

We are required to periodically review our deferred tax assets and determine whether, based on available evidence, a valuation allowance is necessary. The realization of our deferred tax assets, which are predominantly in the United States, is dependent upon the generation of sufficient U.S. and foreign taxable income in the future to offset these assets. Based on our evaluation, we recorded a net increase in valuation allowance of \$10.8 million and \$0.3 million in 2022 and 2021, respectively, against the net deferred tax assets. There was no valuation allowance release in 2022. The increases in valuation allowance in 2021 was offset by the valuation allowance release of \$9.6 million related to deferred taxes for certain foreign jurisdictions. The Company reduced its valuation allowance in 2021 based on continued improved operating results over the past few years and expectations about generating foreign taxable income in the future. Changes in the amount of the valuation allowance in the U.S. and in foreign jurisdictions could result in a material non-cash expense or benefit in the period in which the valuation allowance is adjusted and our results of operations could be materially affected.

The calculation of tax liabilities involves dealing with uncertainties in the application of complex global tax regulations. We recognize potential liabilities for anticipated tax audit issues in the U.S. and other tax jurisdictions based on our estimate of whether, and the extent to which, additional taxes will be due. In the event we determine that it is appropriate to create a reserve or increase an existing reserve for any such potential liabilities, the amount of the additional reserve will be charged as an expense in the period in which it is determined. If payment of these amounts ultimately proves to be unnecessary, the reversal of the liabilities would result in tax benefits being recognized in the period when we determine the liabilities are no longer necessary. If the estimate of tax liabilities proves to be less than the ultimate tax assessment for the applicable period, a further charge to expense in the period such shortfall is determined would result. Either such charge to expense could have a material and adverse effect on our operating results for the applicable period.

Our future effective income tax rates could be adversely affected if tax authorities challenge our international tax structure or if our relative mix of U.S. and international income changes for any reason. Accordingly, there can be no assurance that our effective income tax rate will be less than the U.S. federal statutory rate in future periods.

***We are subject to taxation-related risks in multiple jurisdictions, and the adoption and interpretation of new tax legislation, tax regulations, tax rulings, or exposure to additional tax liabilities could materially affect our business, financial condition and results of operations.***

Tax laws are regularly re-examined and evaluated globally. New laws and interpretations of the law are taken into account for financial statement purposes in the quarter or year that they become applicable. Tax authorities are increasingly scrutinizing the tax positions of multinational companies. If U.S. or other foreign tax authorities change applicable tax laws, or if there is a change in interpretation of existing law, our overall liability could increase, and our business, financial condition and results of operations may be harmed.

In December 2017, the legislation commonly referred to as the Tax Cuts and Jobs Act (the Tax Act) was enacted, which contains significant changes to U.S. tax law, including a reduction in the U.S. corporate tax rate and a transition to a new partial territorial system of taxation. The primary impact of the Tax Act on our provision for (benefit from) income taxes was a reduction of the future tax benefits of our deferred tax assets as a result of the reduction in the corporate income tax rate.

In addition, as of January 1, 2022, the Tax Act requires research and experimental expenditures attributable to research conducted within the United States to be capitalized and amortized ratably over a five-year period. Any such expenditures attributable to research conducted outside the United States must be capitalized and amortized over a 15-year period. The Internal Revenue Service has not issued Treasury Regulations which provide guidance on how to apply this new tax law. If or when Treasury Regulations are released, it may impact the Company's estimate of capitalized costs or the Company's current interpretation of the tax law. There continues to be legislative discussions about removing this capitalization requirement in 2023. It is currently unlikely there will be any retroactive application to the 2022 capitalization requirement. Any change in tax law will be accounted for in the period of enactment.

Certain provisions of the Tax Act were modified by legislation enacted in March 2020, entitled the Coronavirus Aid, Relief, and Economic Security Act (the CARES Act), and the impact of both the Tax Act and the CARES Act is subject to ongoing technical guidance and accounting interpretation, which we will continue to monitor and assess. Further, the Inflation Reduction Act of 2022, (the "IRA"), has become effective as of January 1, 2023, which, among other things, imposes a one-percent non-deductible excise tax on certain repurchases of stock that are made by U.S. publicly traded corporations on or after January 1, 2023, which may affect our share repurchase program.

In addition, the Organization for Economic Co-operation and Development, the European Union, as well as a number of other countries and organizations have recently enacted new laws, and proposed or recommended changes to existing tax laws, that may increase our tax obligations in many countries where we do business or require us to change the manner in which we operate our business. As we expand the scale of our business activities, any changes in U.S. or foreign tax laws that apply to such activities may increase our worldwide effective tax rate and harm our business, financial condition and results of operations.

### **Legal, Regulatory and Compliance Risks**

#### ***We or our customers may face intellectual property infringement claims from third parties.***

Our industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. In particular, leading companies in the telco industry have extensive patent portfolios. Also, patent infringement claims and litigation by entities that purchase or control patents, but do not produce goods or services covered by the claims of such patents (so-called "non-practicing entities" or "NPEs"), have increased rapidly over the last decade or so. From time to time, third parties, including NPEs, have asserted, and may assert in the future, patent, copyright, trademark and other intellectual property rights against us or our customers, and have initiated audits to determine whether we have missed royalty payments for technology that we license. Our suppliers and their customers, including us, may have similar claims asserted against them. A number of third parties, including companies with greater financial and other resources than us, have asserted patent rights to technologies that are important to us.

Any intellectual property litigation, regardless of its outcome, could result in substantial expense and significant diversion of the efforts of our management and technical personnel. An adverse determination in any such proceeding could subject us to significant liabilities and temporary or permanent injunctions and require us to seek licenses from third parties or pay royalties that may be substantial. Furthermore, necessary licenses may not be available on terms satisfactory to us, or at all. An unfavorable outcome on any such litigation matter could require that we pay substantial damages, could require that we pay ongoing royalty payments, or could prohibit us from selling certain of our products. Any such outcome could have a material and adverse effect on our business, operating results, financial condition and cash flows.

Our suppliers and customers may have intellectual property claims relating to our products asserted against them. We have agreed to indemnify some of our suppliers and most of our customers for patent infringement relating to our products. The scope of this indemnity varies, but, in some instances, includes indemnification for damages and expenses (including reasonable attorney's fees) incurred by the supplier or customer in connection with such claims. If a supplier or a customer seeks to enforce a claim for indemnification against us, we could incur significant costs defending such claim, the underlying claim or both. An adverse determination in either such proceeding could subject us to significant liabilities and have a material and adverse effect on our operating results, cash flows and financial condition.

***We may be the subject of litigation which, if adversely determined, could harm our business and operating results.***

We may be subject to claims arising in the normal course of business. The costs of defending any litigation, whether in cash expenses or in management time, could harm our business and materially and adversely affect our operating results and cash flows. An unfavorable outcome on any litigation matter could require that we pay substantial damages, or, in connection with any intellectual property infringement claims, could require that we pay ongoing royalty payments or prohibit us from selling certain of our products. In addition, we may decide to settle any litigation, which could cause us to incur significant settlement costs. A settlement or an unfavorable outcome on any litigation matter could have a material and adverse effect on our business, operating results, financial condition and cash flows.

***Our failure to adequately protect our proprietary rights and data may adversely affect us.***

As of March 31, 2023, we held 124 issued U.S. patents and 49 issued foreign patents, and had 44 patent applications pending. Although we attempt to protect our intellectual property rights through patents, trademarks, copyrights, licensing arrangements, maintaining certain technology as trade secrets and other measures, we can give no assurances that any patent, trademark, copyright or other intellectual property rights owned by us will not be invalidated, circumvented or challenged, that such intellectual property rights will provide competitive advantages to us, or that any of our pending or future patent applications will be issued with the scope of the claims sought by us, if at all. We can give no assurances that others will not develop technologies that are similar or superior to our technologies, duplicate our technologies or design around the patents that we own. In addition, effective patent, copyright and trade secret protection may be unavailable or limited in certain foreign countries in which we do business or may do business in the future.

We may enter into confidentiality or license agreements with our employees, consultants, and vendors and our customers, as needed, and generally limit access to, and distribution of, our proprietary information. Nevertheless, we cannot provide assurances that the steps taken by us will prevent misappropriation of our technology. In addition, we have taken in the past, and may take in the future, legal action to enforce our patents and other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of management time and other resources, and could materially and adversely affect our business, operating results, financial condition and cash flows.

***Our use of open source software in some of our products may expose us to certain risks.***

Some of our products contain software modules licensed for use from third-party authors under open source licenses. Use and distribution of open source software may entail greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the code. Some open source licenses contain requirements that we make available source code for modifications or derivative works we create based upon the type of open source software we use. If we combine our proprietary software with open source software in a certain manner, we could, under certain of the open source licenses, be required to release the source code of our proprietary software to the public. This could allow our competitors to create similar products with lower development effort and in less time and ultimately could result in a loss of product sales for us.

Although we monitor our use of open source closely, it is possible our past, present or future use of open source has triggered or may trigger the foregoing requirements. Furthermore, the terms of many open source licenses have not been interpreted by U.S. courts, and there is a risk that such licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to commercialize our products. In such event, we could be required to seek licenses from third parties in order to continue offering our products, to re-engineer our products or to discontinue the sale of our products in the event re-engineering cannot be accomplished on a timely basis, any of which could materially and adversely affect our operating results, financial condition and cash flows.

***We are subject to import and export control and trade and economic sanction laws and regulations that could subject us to liability or impair our ability to compete in international markets.***

Our products are subject to U.S. export control laws, and may be exported outside the United States only with the required export license or through an export license exception, in most cases because we incorporate encryption technology into certain of our products. We are also subject to U.S. trade and economic sanction regulations which include prohibitions on the sale or supply of certain products and services to the United States embargoed or sanctioned countries, governments, persons and entities. In addition, various countries regulate the import of certain technology and have enacted laws that could limit our ability to distribute our products, or could limit our customers' ability to implement our products, in those countries. Although we take precautions and have processes in place to prevent our products and services from being provided in violation of such laws, our products may have been in the past, and could in the future be, provided inadvertently in violation of such laws, despite the precautions we take. In March 2020, we received an administrative subpoena from the U.S. Treasury Department's office of Foreign Assets Control ("OFAC") requesting information about transactions involving Iran. The transactions were by the French company TVN, which we acquired in early 2016. Pursuant to regulations that remained in place until 2018, foreign subsidiaries of U.S. companies were allowed to engage in transactions with Iran if certain requirements were met. In February 2023, OFAC notified us that it had completed its review of these matters and closed its review with the issuance of a Cautionary Letter. While OFAC did not assess any penalties, the Cautionary Letter does not preclude OFAC from taking future enforcement actions if additional information warrants renewed attention. Furthermore, OFAC may consider our regulatory history, including this subpoena, our disclosures and the Cautionary Letter, if we are involved in future enforcement cases for failure to comply with export control laws and regulations. If we are found to have violated U.S. export control laws as a result of future investigations, we and certain of our employees could be subject to civil or criminal penalties, including the possible loss of export privileges, monetary penalties, and, in extreme cases, imprisonment of responsible employees for knowing and willful violations of these laws which could lead to penalties, reputational harm, loss of access to certain markets, or otherwise.

In addition, we may be subject to customs duties that could have a significant adverse impact on our operating results or, if we are able to pass on the related costs in any particular situation, would increase the cost of the related product to our customers. As a result, the future imposition of significant increases in the level of customs duties or the creation of import quotas on our products in Europe or in other jurisdictions, or any of the limitations on international sales described above, could have a material adverse effect on our business, operating results, financial condition and cash flows. Further, some of our customers in Europe have been, or are being, audited by local governmental authorities regarding the tariff classifications used for importation of our products. Import duties and tariffs vary by country and a different tariff classification for any of our products may result in higher duties or tariffs, which could have an adverse impact on our operating results and potentially increase the cost of the related products to our customers.

***Our business and industry are subject to various laws and regulations that could adversely affect our business, operating results, cash flows and financial condition.***

Our business and industry are regulated under various federal, state, local and international laws. For example, we are subject to environmental regulations such as the European Union's Waste Electrical and Electronic Equipment ("WEEE") and Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment ("RoHS") directives and similar legislation enacted in other jurisdictions worldwide. Our failure to comply with these laws could result in our being directly or indirectly liable for costs, fines or penalties and third-party claims, and could jeopardize our ability to conduct business in such regions and countries. We expect that our operations will be affected by other new environmental laws and regulations on an ongoing basis. Although we cannot predict the ultimate impact of any such new laws and regulations, they would likely result in additional costs, and could require that we redesign or change how we manufacture our products, any of which could have a material and adverse effect on our operating results, financial condition and cash flows.

We are subject to the Sarbanes-Oxley Act of 2002 which, among other things, requires an annual review and evaluation of our internal control over financial reporting. If we conclude in future periods that our internal control over financial reporting is not effective or if our independent registered public accounting firm is unable to provide an unqualified attestation as of future year-ends, we may incur substantial additional costs in an effort to correct such problems, and investors may lose confidence in our financial statements, and our stock price may decrease in the short term, until we correct such problems, and perhaps in the long term, as well.



We are subject to requirements under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 that require us to conduct research, disclose, and report whether or not our products contain certain conflict minerals sourced from the Democratic Republic of Congo or its surrounding countries. The implementation of these requirements could adversely affect the sourcing, availability, and pricing of the materials used in the manufacture of components used in our products. In addition, we may incur certain additional costs to comply with the disclosure requirements, including costs related to conducting diligence procedures to determine the sources of conflict minerals that may be used or necessary to the production of our products and, if applicable, potential changes to products, processes or sources of supply as a consequence of such verification activities. It is also possible that we may face reputational harm if we determine that certain of our products contain minerals not determined to be conflict-free and/or we are unable to alter our products, processes or sources of supply to avoid such materials.

Changes in telco legislation and regulations in the United States and other countries could affect our sales and the revenue we are able to derive from our products. In particular, on December 14, 2017, the U.S. Federal Communications Commission (“FCC”) voted to repeal the “net neutrality” rules and return to a “light-touch” regulatory framework. The FCC’s new rules, which took effect in June 2018, granted providers of broadband internet access services greater freedom to make changes to their services, including, potentially, changes that may discriminate against or otherwise harm our business. However, a number of parties have appealed these rules, which appeals are currently being reviewed by the D.C. Circuit Court of Appeals; thus the future impact of the FCC’s repeal and any changes thereto remains uncertain. Additionally, on September 30, 2018, California enacted the California Internet Consumer Protection and Net Neutrality Act of 2018. Since the FCC repealed its nationwide regulations, seven states have also enacted a state-level net neutrality law and a number of other states are considering legislation or executive actions that would regulate the conduct of broadband providers. We cannot predict whether the FCC order or state initiatives will be modified, overturned, or vacated by legal action of the court, federal legislation, or the FCC. The repeal of the net neutrality rules or other regulations dealing with access by competitors to the networks of incumbent operators could slow or stop infrastructure and services investments or expansion by service providers. Increased regulation of our customers’ pricing or service offerings could limit their investments and, consequently, revenue from our products. The impact of new or revised legislation or regulations could have a material adverse effect on our business, operating results, financial condition and cash flows.

***We depend significantly on our international revenue and are subject to the risks associated with international operations, including those of our resellers, contract manufacturers and outsourcing partners, which may negatively affect our operating results.***

Revenue for the three months ended March 31, 2023 and April 1, 2022 derived from customers outside of the United States represented approximately 33% and 41% of our revenue, respectively. Although no assurance can be given with respect to international sales growth in any one or more regions, we expect that international revenue will likely continue to represent, from year to year, a majority, and potentially increasing, percentage of our annual revenue for the foreseeable future. A significant percentage of our revenue is generated from sales to resellers, VARs and systems integrators, particularly in emerging market countries. Furthermore, the majority of our employees are based in our international offices and locations, and most of our contract manufacturing occurs outside of the United States. In addition, we outsource a portion of our research and development activities to certain third-party partners with development centers located in different countries, particularly Ukraine and India.

Our international operations, international operations of our resellers, contract manufacturers and outsourcing partners, and our efforts to maintain and increase revenue in international markets are subject to a number of risks, which are generally greater with respect to emerging market countries, including the following:

- growth and stability of the economy in one or more international regions, including regional economic impacts of the effects of the COVID-19 pandemic, the Russia-Ukraine conflict and rising tensions between China and Taiwan and the United States;
- fluctuations in currency exchange rates;
- changes in foreign government regulations and telco standards;
- import and export license requirements, tariffs, taxes, economic sanctions, contractual limitations and other trade barriers;
- our significant reliance on resellers and others to purchase and resell our products and solutions, particularly in emerging market countries;
- availability of credit, particularly in emerging market countries;

- longer collection periods and greater difficulty in enforcing contracts and collecting accounts receivable, especially from smaller customers and resellers, particularly in emerging market countries;
- compliance with the FCPA, the U.K. Bribery Act and/or similar anti-corruption and anti-bribery laws, particularly in emerging market countries;
- the burden of complying with a wide variety of foreign laws, treaties and technical standards;
- fulfilling “country of origin” requirements for our products for certain customers;
- difficulty in staffing and managing foreign operations;
- business and operational disruptions or delays caused by political, social and/or economic instability and unrest (e.g., Ukraine), including risks related to terrorist activity, particularly in emerging market countries;
- changes in economic policies by foreign governments, including the imposition and potential continued expansion of economic sanctions by the United States and the European Union on the Russian Federation;
- changes in diplomatic and trade relationships, including the imposition of new trade restrictions, trade protection measures, import or export requirements, trade embargoes and other trade barriers, including those between the United States and China;
- any negative economic impacts resulting from the political environment in the United States or the United Kingdoms’ exit from the European Union; and
- business and economic disruptions and delays caused by outbreaks of disease, epidemics and potential pandemics, such as the effects of the COVID-19 pandemic, which has led and may continue to lead to trade shows and in-person meetings being canceled or delayed and employees working remotely, and which has impacted our supply chain and may continue to impact our supply chain or general business in other manners.

We have certain international customers who are billed in their local currency, primarily the Euro, British pound and Japanese yen, which subjects us to foreign currency risk. In addition, a portion of our operating expenses relating to the cost of certain international employees, are denominated in foreign currencies, primarily the Euro, Israeli shekel, British pound, Singapore dollar, Chinese yuan and Indian rupee. Although we do hedge against the Euro, British pound, Israeli shekel and Japanese yen, gains and losses on the conversion to U.S. dollars of accounts receivable, accounts payable and other monetary assets and liabilities arising from international operations may contribute to fluctuations in our operating results. Furthermore, payment cycles for international customers are typically longer than those for customers in the United States. Unpredictable payment cycles could cause us to fail to meet or exceed the expectations of security analysts and investors for any given period.

Most of our international revenue is denominated in U.S. dollars, and fluctuations in currency exchange rates could cause our products to become relatively more expensive to customers in a particular country or region, leading to a reduction in revenue or profitability from sales in that country or region. The potential negative impact of a strong U.S. dollar on our business may be exacerbated by the significant devaluation of a number of foreign currencies. Also, if the U.S. dollar were to weaken against many foreign currencies, there can be no assurance that a weaker dollar would lead to growth in customer spending in foreign markets.

Our operations outside the United States also require us to comply with a number of U.S. and international regulations that prohibit improper payments or offers of payments to foreign governments and their officials and political parties for corrupt purposes. For example, our operations in countries outside the United States are subject to the FCPA and similar laws, including the U.K. Bribery Act. Our activities in certain emerging countries create the risk of unauthorized payments or offers of payments by one of our employees, consultants, sales agents or channel partners that could be in violation of various anti-corruption laws, even though these parties may not be under our control. Under the FCPA and U.K. Bribery Act, companies may be held liable for the corrupt actions taken by their directors, officers, employees, channel partners, sales agents, consultants, or other strategic or local partners or representatives. We have internal control policies and procedures with respect to FCPA compliance, have implemented FCPA training and compliance programs for our employees, and include in our agreements with resellers a requirement that those parties comply with the FCPA. However, we cannot provide assurances that our policies, procedures and programs will prevent violations of the FCPA or similar laws by our employees or agents, particularly in emerging market countries, and as we expand our international operations. Any such violation, even if prohibited by our policies, could result in criminal or civil sanctions against us.

The effect of one or more of these international risks could have a material and adverse effect on our business, financial condition, operating results and cash flows.

## Risks Related to Ownership of Our Common Stock

### ***Some anti-takeover provisions contained in our certificate of incorporation and bylaws, as well as provisions of Delaware law, could impair a takeover attempt.***

We have provisions in our certificate of incorporation and bylaws that could have the effect of rendering more difficult or discouraging an acquisition deemed undesirable by our Board. These include provisions:

- authorizing blank check preferred stock, which could be issued with voting, liquidation, dividend and other rights superior to our common stock;
- limiting the liability of, and providing indemnification to, our directors and officers;
- limiting the ability of our stockholders to call, and bring business before, special meetings;
- requiring advance notice of stockholder proposals for business to be conducted at meetings of our stockholders and for nominations of candidates for election to our Board;
- controlling the procedures for conducting and scheduling of Board and stockholder meetings; and
- providing our Board with the express power to postpone previously scheduled annual meetings and to cancel previously scheduled special meetings.

These provisions could delay hostile takeovers, changes in control of the Company or changes in our management. As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation law, which prevents some stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of substantially all of our outstanding common stock. Any provision of our certificate of incorporation or bylaws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

### ***Our common stock price may be extremely volatile, and the value of an investment in our stock may decline.***

Our common stock price has been highly volatile. We expect that this volatility will continue in the future due to factors such as:

- general market and economic conditions, including inflation, rising interest rates, volatile capital markets and ongoing supply chain disruptions and the related impacts of the COVID-19 pandemic, uncertainty and volatility in the financial services sector, the Russia-Ukraine conflict and rising tensions between China and Taiwan and the United States;
- actual or anticipated variations in operating results;
- increases or decreases in the general stock market or to the stock prices of technology companies;
- announcements of technological innovations, new products or new services by us or by our competitors or customers;
- changes in financial estimates or recommendations by stock market analysts regarding us or our competitors;
- announcements by us or our competitors of significant acquisitions, dispositions, strategic partnerships, joint ventures or capital commitments;
- announcements by our customers regarding end user market conditions and the status of existing and future infrastructure network deployments;
- additions or departures of key personnel; and
- future equity or debt offerings or our announcements of these offerings.

In addition, in recent years, the stock market in general, and The NASDAQ Global Select Market and the securities of technology companies in particular, have experienced extreme price and volume fluctuations. These fluctuations have often been unrelated or disproportionate to the operating performance of individual companies. These broad market fluctuations have in the past, and may in the future, materially and adversely affect our stock price, regardless of our operating results. In these circumstances, investors may be unable to sell their shares of our common stock at or above their purchase price over the short term, or at all.

***We cannot guarantee that our stock repurchase program will be fully implemented or that it will enhance long-term stockholder value.***

In February 2022, our Board of Directors approved a stock repurchase program for the repurchase of up to \$100 million of the outstanding shares of our common stock. The repurchase program expires in February 2025 and we are not obligated to repurchase a specified number or dollar value of shares. Share repurchases will be made from time to time in open market purchases and 10b5-1 trading plans, as permitted by securities laws and other legal requirements. Any share repurchases remain subject to the circumstances in place at that time, including prevailing market prices. As a result, there can be no guarantee around the timing or volume of our share repurchases. The stock repurchase program could affect the price of our common stock, increase volatility and diminish our cash reserves. Our repurchase program may be suspended or terminated at any time and, even if fully implemented, may not enhance long-term stockholder value.

***Our stock price may decline if additional shares are sold in the market or if analysts drop coverage of or downgrade our stock.***

Future sales of substantial amounts of shares of our common stock by our existing stockholders in the public market, or the perception that these sales could occur, may cause the market price of our common stock to decline. In addition, we issue additional shares upon exercise of stock options, including under our 2002 Employee Stock Purchase Plan, and in connection with grants of restricted stock units on an ongoing basis. To the extent we do not elect to pay solely cash upon conversion of the Notes, we will also be required to issue additional shares of common stock upon conversion. Increased sales of our common stock in the market after exercise of outstanding stock options or grants of restricted stock units could exert downward pressure on our stock price. These sales also might make it more difficult for us to sell equity or equity-related securities in the future at a time and price we deem appropriate.

The trading market for our common stock relies in part on the availability of research and reports that third-party industry or securities analysts publish about us and our business. If we do not maintain adequate research coverage or if one or more of the analysts who do cover us downgrade our stock or publishes inaccurate or unfavorable research about our business, our stock price may decline. If one or more of these analysts cease coverage of us or fails to publish reports on us regularly, we could lose visibility in the market, which in turn could cause the liquidity of our stock and our stock price to decline.

## **ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS**

### ***Issuer Purchases of Equity Securities***

In February 2022, the Board of Directors authorized the Company to repurchase up to \$100 million of the Company's outstanding shares of common stock through February 2025. The Company is authorized to repurchase, from time-to-time, shares of its outstanding common stock through open market purchases and 10b5-1 trading plans, in accordance with applicable rules and regulations, at such time and such prices as management may decide. The program does not obligate the Company to repurchase any specific number of shares and may be discontinued at any time. The actual timing and amount of repurchases are subject to business and market conditions, corporate and regulatory requirements, stock price, acquisition opportunities and other factors. As of March 31, 2023, approximately \$94.9 million of the share repurchase authorization remained available.

There were no repurchase activities during the three months ended March 31, 2023.

**ITEM 6. EXHIBITS**

<u>Exhibit Number</u>	<u>Exhibit Index</u>
3.2	<a href="#">Amended and Restated Bylaws of Harmonic Inc.</a>
31.1	<a href="#">Section 302 Certification of Principal Executive Officer</a>
31.2	<a href="#">Section 302 Certification of Principal Financial Officer</a>
32.1*	<a href="#">Section 906 Certification of Principal Executive Officer</a>
32.2*	<a href="#">Section 906 Certification of Principal Financial Officer</a>
101	The following materials from Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023, formatted in Inline Extensible Business Reporting Language (iXBRL) include: (i) Condensed Consolidated Balance Sheets at March 31, 2023 and December 31, 2022, (ii) Condensed Consolidated Statements of Operations for the three months ended March 31, 2023 and April 1, 2022, (iii) Condensed Consolidated Statements of Comprehensive Income (Loss) for the three months ended March 31, 2023 and April 1, 2022, (iv) Condensed Consolidated Statements of Stockholders' Equity for the three months ended March 31, 2023 and April 1, 2022, (v) Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2023 and April 1, 2022, and (vi) Notes to Condensed Consolidated Financial Statements.
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

\* The certifications attached as Exhibits 32.1 and 32.2 that accompany this Quarterly Report on Form 10-Q, are deemed furnished and not filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of Harmonic Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Quarterly Report on Form 10-Q, irrespective of any general incorporation language contained in such filing.

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

HARMONIC INC.

By: /s/ Jeremy Rosenberg  
Jeremy Rosenberg  
Title: Interim Chief Financial Officer  
Date: May 9, 2023

AMENDED AND RESTATED  
BYLAWS  
OF  
HARMONIC INC.  
(a Delaware corporation)  
(as amended on May 3, 2023)

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AMENDED AND RESTATED

BYLAWS

OF

HARMONIC INC.  
(a Delaware corporation)

ARTICLE I

CORPORATE OFFICES

1.1 REGISTERED OFFICE

The registered office of the corporation shall be fixed in the certificate of incorporation of the corporation.

1.2 OTHER OFFICES

The corporation may at any time establish other offices at any place or places.

ARTICLE II

MEETINGS OF STOCKHOLDERS

2.1 PLACE OF MEETINGS

Meetings of stockholders shall be held at a place, if any, within or outside the State of Delaware designated by the board of directors of the corporation (the “board of directors”). The board of directors may, in its sole discretion, determine that a meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication as authorized by Section 211(a)(2) of the General Corporation Law of the State of Delaware (the “General Corporation Law of Delaware”). In the absence of any such designation, stockholders’ meetings shall be held at the principal executive office of the corporation.

2.2 ANNUAL MEETING

The annual meeting of stockholders shall be held each year on a date and at a time designated by the board of directors. At the annual meeting, directors shall be elected, and any other proper business may be transacted that is brought in accordance with Section 2.5 of these bylaws. The board of directors acting pursuant to a resolution adopted by a majority of the Whole Board may cancel, postpone or reschedule any previously scheduled annual meeting at any time, before or after the notice for such meeting has been sent to the stockholders. For the purposes of these bylaws, the

term "Whole Board" shall mean the total number of authorized directorships whether or not there exist any vacancies or other unfilled seats in previously authorized directorships.

### 2.3 SPECIAL MEETING

(a) A special meeting of the stockholders, other than as required by statute, may be called at any time by the board of directors acting pursuant to a resolution adopted by a majority of the Whole Board, the chairman of the board of directors, or by the president, but such special meetings may not be called by any other person or persons and any power of stockholders to call a special meeting of stockholders is specifically denied.

(b) The notice of a special meeting shall include the purpose for which the meeting is called. Only such business shall be considered at a special meeting of stockholders as shall have been brought before the meeting by or at the direction of a majority of the Whole Board, the chairman of the board of directors, or the president. Nothing contained in this Section 2.3 shall be construed as limiting, fixing or affecting the time when a meeting of stockholders called by action of the board of directors may be held.

### 2.4 NOTICE OF STOCKHOLDERS' MEETINGS

All notices of meetings of stockholders shall be sent or otherwise given in accordance with Section 2.6 of these bylaws not less than ten (10) nor more than sixty (60) days before the date of the meeting. The notice shall specify the place, date and hour of the meeting, the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, the record date for determining the stockholders entitled to vote at the meeting, if such date is different from the record date for determining stockholders entitled to notice of the meeting, and in the case of a special meeting, the purpose or purposes for which the meeting is called. Any previously scheduled meeting of the stockholders may be postponed or rescheduled, and (unless the certificate of incorporation otherwise provides) any special meeting of the stockholders may be cancelled, by a resolution adopted by a majority of the Whole Board.

### 2.5 ADVANCE NOTICE OF STOCKHOLDER NOMINEES AND STOCKHOLDER BUSINESS

(a) Annual Meetings of Stockholders.

(i) To be properly brought before an annual meeting, nominations for the election of directors or the proposal of other business to be transacted by the stockholders at an annual meeting of stockholders may be made only (1) pursuant to the corporation's notice of meeting (or any supplement thereto) given by or at the direction of the board of directors, (2) by or at the direction of the board of directors or any committee thereof that has been formally delegated authority to nominate such persons or propose such business pursuant to a resolution adopted by a majority of the Whole Board, (3) as may be provided in the certificate of designations for any class or series of preferred stock, or (4) by a stockholder who (A) is a stockholder of record at the time of the giving of notice required by Section 2.5(a)(ii); (B) is a stockholder of record on the record date

for the determination of stockholders entitled to notice of, and to vote at, the annual meeting;(C) is a stockholder of record at the time of the annual meeting and (D) complies with the procedures set forth in this Section 2.5(a).

(ii) For nominations or other business to be properly brought before an annual meeting by a stockholder pursuant to clause (4) of Section 2.5(a)(i), the stockholder must have given timely notice thereof in proper written form to the secretary of the corporation (the "Secretary"), and any such nomination or proposed business must constitute a proper matter for stockholder action. To be timely, a stockholder's notice must be received by the Secretary at the principal executive offices of the corporation no earlier than 8:00 a.m., Pacific time, on the 120th day and no later than 5:00 p.m., Pacific time, on the 90th day prior to the day of the one-year anniversary of the date of the preceding year's annual meeting of stockholders as first specified in the corporation's notice of such annual meeting (without regard to any adjournment, rescheduling, postponement or other delay of such annual meeting occurring after such notice was first sent); provided, however, that in the event that no annual meeting was held in the preceding year or the date of the annual meeting for the current year has been changed by more than twenty-five (25) days from the first anniversary of the preceding year's annual meeting, then notice by the stockholder to be timely must be so received by the Secretary no earlier than 8:00 a.m., Pacific time, on the 120th day prior to the day of the annual meeting and no later than 5:00 p.m., Pacific time, on the later of the 90th day prior to the day of the annual meeting or, if the first Public Announcement of the date of such annual meeting is less than 100 days prior to the date of such annual meeting, the 10th day following the day on which Public Announcement of the date of the annual meeting was first made by the corporation. In no event shall any adjournment, rescheduling, postponement or other delay of an annual meeting or the announcement thereof commence a new time period (or extend any time period) for the giving of a stockholder's notice as described in this Section 2.5. In no event may a stockholder provide notice with respect to a greater number of director candidates than there are director seats subject to election by the stockholders at the annual meeting. If the number of directors to be elected to the board of directors is increased and there is no Public Announcement naming all of the nominees for director or specifying the size of the increased board of directors at least 10 days before the last day that a stockholder may deliver a notice of nomination pursuant to the foregoing provisions, then a stockholder's notice required by this Section 2.5(a)(ii) will also be considered timely, but only with respect to any nominees for any new positions created by such increase, if it is received by the Secretary at the principal executive offices of the corporation no later than 5:00 p.m., Pacific time, on the 10th day following the day on which such Public Announcement is first made. "Public Announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or a comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or any successor thereto (including the rules and regulations thereunder, the "1934 Act"), or by such other means as is reasonably designed to inform the public or stockholders of the corporation in general of such information, including, without limitation, posting on the corporation's investor relations website.

(iii) To be in proper written form, a stockholder's notice to the Secretary shall set forth:

(1) as to each person (a “nominee”) whom the stockholder proposes to nominate for election or re-election as a director:

a) the name, age, business address, residence address and the principal occupation or employment of the nominee;

b) the class and number of shares of the corporation that are held of record or are beneficially owned by the nominee and any (A) Derivative Instruments (as defined below) held or beneficially owned by such nominee, including the full notional amount of any securities that, directly or indirectly, underlie any Derivative Instrument, and (B) other agreement, arrangement or understanding that has been made the effect or intent of which is to create or mitigate loss to, manage risk or benefit of share price changes for, or increase or decrease the voting power of the nominee with respect to the corporation’s securities;

c) all information relating to such nominee that is required to be disclosed in connection with solicitations of proxies for the contested election of directors, or is otherwise required, in each case pursuant to Section 14 of the 1934 Act;

d) such nominee’s written consent (A) to being named as a nominee of such stockholder, (B) to being named in the corporation’s form of proxy pursuant to Rule 14a-19 under the 1934 Act (“Rule 14a-19”) and (C) to serving as a director of the corporation if elected;

e) any direct or indirect compensatory, payment, indemnification or other financial agreement, arrangement or understanding that such nominee has, or has had within the past three years, with any person or entity other than the corporation (including, without limitation, the amount of any payment or payments received or receivable thereunder), in each case in connection with candidacy or service as a director of the corporation (such agreement, arrangement or understanding, a “Third-Party Compensation Arrangement”);

f) a written statement executed by the nominee acknowledging that as a director of the corporation, the nominee will owe fiduciary duties under Delaware law with respect to the corporation and its stockholders; and

g) a description of any other material relationships between the nominee and such nominee’s respective affiliates and associates, or others acting in concert with them, on the one hand, and such stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination is made, and their respective affiliates and associates, or others acting in concert with them, on the other hand, including, without limitation, all information that would be required to be disclosed pursuant to Item 404 under Regulation S-K if such stockholder, beneficial owner, affiliate or associate were the “registrant” for purposes of such rule and such person were a director or executive officer of such registrant;

(2) as to each matter the stockholder proposes to bring before the annual meeting:

a) a brief description of the business desired to be brought before the annual meeting, the text of the proposal or business (including the text of any resolutions proposed for consideration and, if applicable, the text of any proposed amendment to these bylaws) and the reasons for conducting such business at the annual meeting;

b) any material interest of the stockholder or a Stockholder Associated Person in such business; and

c) all agreements, arrangements and understandings between such stockholder or a Stockholder Associated Person and any other persons (including their names) in connection with the proposal of such business by such stockholder; and

(3) as to the stockholder giving the notice:

a) the name and address, as they appear on the corporation's books, of the stockholder proposing such business and any Stockholder Associated Person (as defined below);

b) for each class or series, the number of shares of the corporation that are, directly or indirectly, held of record or are beneficially owned by the stockholder or any Stockholder Associated Person;

c) any agreement, arrangement or understanding between such stockholder or any Stockholder Associated Person and any other person or persons (including, in each case, their names) in connection with the proposal of such nomination or other business;

d) any (A) agreement, arrangement or understanding (including, without limitation and regardless of the form of settlement, any derivative, long or short positions, profit interests, forwards, futures, swaps, options, warrants, convertible securities, stock appreciation or similar rights, hedging transactions and borrowed or loaned shares) that has been entered into by or on behalf of such stockholder or any Stockholder Associated Person with respect to the corporation's securities (any of the foregoing, a "Derivative Instrument"), including the full notional amount of any securities that, directly or indirectly, underlie any Derivative Instrument, and (B) other agreement, arrangement or understanding that has been made the effect of which is to mitigate loss to, or manage the risk or benefit from share price changes for, or increase or decrease the voting power of, such stockholder or any Stockholder Associated Person with respect to any securities of the corporation;

e) any proxy, contract, arrangement, understanding or relationship pursuant to which such stockholder or any Stockholder Associated Person has a right to vote any shares of any security of the corporation;

f) any rights to dividends on the corporation's securities owned beneficially by such stockholder or any Stockholder Associated Person that are separated or separable from the underlying security;

g) any proportionate interest in the corporation's securities or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which such stockholder or any Stockholder Associated Person is a general partner or, directly or indirectly, beneficially owns an interest in a general partner of such general or limited partnership;

h) any performance-related fees (other than an asset-based fee) that such stockholder or any Stockholder Associated Person is entitled to based on any increase or decrease in the value of the corporation's securities or Derivative Instruments, including, without limitation, any such interests held by members of the immediate family of such persons sharing the same household;

i) any significant equity interests or any Derivative Instruments in any principal competitor of the corporation that are held by such stockholder or any Stockholder Associated Person;

j) any direct or indirect interest of such stockholder or any Stockholder Associated Person in any contract with the corporation, any affiliate of the corporation or any principal competitor of the corporation (in each case, including, without limitation, any employment agreement, collective bargaining agreement or consulting agreement);

k) any material pending or threatened legal proceeding in which such stockholder or any Stockholder Associated Person is a party or material participant involving the corporation or any of its officers, directors or affiliates;

l) any material relationship between such stockholder or any Stockholder Associated Person, on the one hand, and the corporation or any of its officers, directors or affiliates, on the other hand;

m) a representation and undertaking that the stockholder is a holder of record of stock of the corporation as of the date of submission of the stockholder's notice and intends to appear in person or by proxy at the annual meeting to bring such nomination or other business before the annual meeting;

n) a representation and undertaking as to whether such stockholder or any Stockholder Associated Person intends, or is part of a group that intends, to (x) deliver a proxy statement or form of proxy to holders of at least the percentage of the voting power of the corporation's then-outstanding stock required to approve or adopt the proposal or to elect each such nominee (which representation and undertaking must include a statement as to whether such stockholder or any Stockholder Associated Person intends to solicit the requisite percentage of the voting power of the corporation's stock under Rule 14a-19); or (y) otherwise solicit proxies from stockholders in support of such proposal or nomination;

o) any other information relating to such stockholder, any Stockholder Associated Person, or any director nominee or proposed business, that, in each case, would be required to be disclosed in a proxy statement or other filing required to be made in



connection with the solicitation of proxies in support of such nominee (in a contested election of directors) or proposal pursuant to Section 14 of the 1934 Act; and

p) such other information relating to any proposed item of business as the corporation may reasonably require to determine whether such proposed item of business is a proper matter for stockholder action.

In addition, to be timely and in proper written form, a stockholder's notice (and any additional information submitted to the corporation in connection therewith) to the Secretary must be updated and supplemented (1) if necessary, so that the information provided or required to be provided in such notice is true and correct as of the record date(s) for determining the stockholders entitled to notice of, and to vote at, the annual meeting and as of the date that is 10 business days prior to the annual meeting or any adjournment, rescheduling, postponement or other delay thereof; and (2) to provide any additional information that the corporation may reasonably request. Any such update and supplement or additional information (including, if requested pursuant to Section 2.5(a)(iii)(3)(p)) must be received by the Secretary at the principal executive offices of the corporation (A) in the case of a request for additional information, promptly following a request therefor, which response must be received by the Secretary not later than such reasonable time as is specified in any such request from the corporation; or (B) in the case of any other update or supplement of any information, not later than five (5) business days following the record date(s) for the annual meeting (in the case of any update and supplement required to be made as of the record date(s)), and not later than eight (8) business days prior to the date for the annual meeting or any adjournment, rescheduling, postponement or other delay thereof (in the case of any update or supplement required to be made as of 10 business days prior to the annual meeting or any adjournment, rescheduling, postponement or other delay thereof). No later than five (5) business days prior to the annual meeting or any adjournment, rescheduling, postponement or other delay thereof, a stockholder nominating individuals for election as a director will provide the corporation with reasonable evidence that such stockholder has met the requirements of Rule 14a-19. The failure to timely provide such update, supplement, evidence or additional information shall result in the nomination or proposal no longer being eligible for consideration at the annual meeting. If the stockholder fails to comply with the requirements of Rule 14a-19 (including because the stockholder fails to provide the corporation with all information or notices required by Rule 14a-19), then the director nominees proposed by such stockholder shall be ineligible for election at the annual meeting and any votes or proxies in respect of such nomination shall be disregarded, notwithstanding that such proxies may have been received by the corporation and counted for the purposes of determining quorum. For the avoidance of doubt, the obligation to update and supplement, or provide additional information or evidence, as set forth in these bylaws shall not limit the corporation's rights with respect to any deficiencies in any notice provided by a stockholder, extend any applicable deadlines pursuant to these bylaws or enable or be deemed to permit a stockholder who has previously submitted notice pursuant to these bylaws to amend or update any nomination or to submit any new nomination. No disclosure pursuant to these bylaws will be required with respect to the ordinary course business activities of any broker, dealer, commercial bank, trust company or other nominee who is the stockholder submitting a notice pursuant to this Section 2.5 solely because such broker, dealer, commercial bank, trust company or other nominee has been directed to prepare and submit

the notice required by these bylaws on behalf of a beneficial owner. For purposes of this Section 2.5, a “Stockholder Associated Person” of any stockholder shall mean (x) any person controlling, directly or indirectly, or acting in concert with, such stockholder, (y) any beneficial owner of shares of stock of the corporation owned of record or beneficially by such stockholder and on whose behalf the proposal or nomination, as the case may be, is being made, or (z) any person controlling, controlled by or under common control with such person referred to in the preceding clauses (x) and (y). Without exception, no business proposed by a stockholder shall be conducted at any annual meeting except in accordance with the procedures set forth in this Section 2.5. The chairperson of the annual meeting shall, if the facts warrant, determine and declare at the meeting that business was not properly brought before the meeting and in accordance with the provisions of this Section 2.5, and, if the chairperson should so determine, the chairperson shall so declare at the meeting that any such business not properly brought before the meeting shall not be transacted.

(b) Special Meetings of Stockholders. Except to the extent required by the General Corporation Law of Delaware, and subject to Section 2.3(a), special meetings of stockholders may be called only in accordance with the corporation’s certificate of incorporation and these bylaws. Only such business will be conducted at a special meeting of stockholders as has been brought before the special meeting pursuant to the corporation’s notice of meeting. If the election of directors is included as business to be brought before a special meeting in the corporation’s notice of meeting, then nominations of persons for election to the board of directors at such special meeting may be made by any stockholder who (i) is a stockholder of record at the time of giving of the notice contemplated by this Section 2.5(b); (ii) is a stockholder of record on the record date for the determination of stockholders entitled to notice of the special meeting; (iii) is a stockholder of record on the record date for the determination of stockholders entitled to vote at the special meeting; (iv) is a stockholder of record at the time of the special meeting; and (v) complies with the procedures set forth in this Section 2.5(b) (with such procedures that the corporation deems to be applicable to such special meeting). For nominations to be properly brought by a stockholder before a special meeting pursuant to this Section 2.5(b), the stockholder’s notice must be received by the Secretary at the principal executive offices of the corporation no earlier than 8:00 a.m., Pacific time, on the 120th day prior to the day of the special meeting and no later than 5:00 p.m., Pacific time, on the 10th day following the day on which Public Announcement of the date of the special meeting was first made. In no event will any adjournment, rescheduling, postponement or other delay of a special meeting or any announcement thereof commence a new time period (or extend any time period) for the giving of a stockholder’s notice as described above. A stockholder’s notice to the Secretary must comply with the applicable notice requirements of Section 2.5(a)(iii), with references therein to “annual meeting” deemed to mean “special meeting” for the purposes of this final sentence of this Section 2.5(b).

(c) Other Requirements and Procedures.

(i) To be eligible to be a nominee of any stockholder for election as a director of the corporation, the proposed nominee must provide to the Secretary, in accordance with the applicable time periods prescribed for delivery of notice under Section 2.5(a)(ii) or Section 2.5(b):

(1) a signed and completed written questionnaire (in the form provided by the Secretary at the written request of the nominating stockholder, which form will be provided by the Secretary within 10 days of receiving such request) containing information regarding such nominee's background and qualifications and such other information as may reasonably be required by the corporation to determine the eligibility of such nominee to serve as a director of the corporation or to serve as an independent director of the corporation;

(2) a written representation and undertaking that, unless previously disclosed to the corporation, such nominee is not, and will not become, a party to any voting agreement, arrangement, commitment, assurance or understanding with any person or entity as to how such nominee, if elected as a director, will vote on any issue;

(3) a written representation and undertaking that, unless previously disclosed to the corporation, such nominee is not, and will not become, a party to any Third-Party Compensation Arrangement;

(4) a written representation and undertaking that, if elected as a director, such nominee would be in compliance, and will continue to comply, with the corporation's corporate governance, conflict of interest, confidentiality, stock ownership and trading guidelines, and other policies and guidelines applicable to directors and in effect during such person's term in office as a director (and, if requested by any candidate for nomination, the Secretary will provide to such proposed nominee all such policies and guidelines then in effect); and

(5) a written representation and undertaking that such nominee, if elected, intends to serve a full term on the board of directors.

(ii) At the request of the board of directors, any person nominated by the board of directors for election as a director must furnish to the Secretary the information that is required to be set forth in a stockholder's notice of nomination pertaining to such nominee.

(iii) Only persons who are nominated in accordance with the procedures set forth in this Section 2.5 shall be eligible for election as directors. No business proposed by a stockholder will be conducted at a stockholder meeting except in accordance with this Section 2.5.

(iv) The chairperson of the applicable meeting shall, if the facts warrant, determine and declare at the meeting that a nomination was not made in accordance with the procedures prescribed by these bylaws or that other proposed business was not properly brought before the meeting. If the chairperson should so determine, then the chairperson shall so declare at the meeting, and the defective nomination shall be disregarded or such business will not be transacted, as the case may be.

(v) Notwithstanding anything to the contrary in this Section 2.5, unless otherwise required by law, if the stockholder (or a qualified representative of the stockholder) does not appear in person at the meeting to present a nomination or other proposed business, such nomination will be disregarded or such business will not be transacted, as the case may be,

notwithstanding that proxies in respect of such nomination or business may have been received by the corporation and counted for purposes of determining a quorum. For purposes of this Section 2.5, to be considered a qualified representative of the stockholder, a person must be a duly authorized officer, manager or partner of such stockholder or must be authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting, and such person must produce such writing or electronic transmission, or a reliable reproduction of the writing or electronic transmission, at the meeting.

(vi) In addition to the foregoing provisions of this Section 2.5, a stockholder must also comply with all applicable requirements of state law and of the 1934 Act with respect to the matters set forth in this Section 2.5, it being understood that (1) any references in these bylaws to the 1934 Act are not intended to, and will not, limit any requirements applicable to nominations or proposals as to any other business to be considered pursuant to this Section 2.5; and (2) compliance with clauses (3) and (4) of Section 2.5(a)(i) and with Section 2.5(b) are the exclusive means for a stockholder to make nominations or submit other business (other than as provided in Section 2.5(c)(vii)).

(vii) Notwithstanding anything to the contrary in this Section 2.5, the notice requirements set forth in these bylaws with respect to the proposal of any business pursuant to this Section 2.5 will be deemed to be satisfied by a stockholder if (1) such stockholder has submitted a proposal to the corporation in compliance with Rule 14a-8 under the 1934 Act; and (2) such stockholder's proposal has been included in a proxy statement that has been prepared by the corporation to solicit proxies for the meeting of stockholders. Subject to Rule 14a-8 and other applicable rules and regulations under the 1934 Act, nothing in these bylaws will be construed to permit any stockholder, or give any stockholder the right, to include or have disseminated or described in the corporation proxy statement any nomination of a director or any other business proposal.

## 2.6 MANNER OF GIVING NOTICE

Notice of any meeting of stockholders shall be given in accordance with Section 232 of the General Corporation Law of Delaware.

## 2.7 QUORUM

The holders of a majority of the voting power of the capital stock of the corporation issued and outstanding and entitled to vote thereat, present in person or represented by proxy at the meeting, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as required by law, the certificate of incorporation, these bylaws or the rules of any applicable stock exchange on which the corporation's securities are listed. Where a separate vote by a class or series or classes or series is required, a majority of the voting power of the outstanding shares of such class or series or classes or series, present in person or represented by proxy, shall constitute a quorum entitled to take action with respect to that vote on that matter, except as otherwise required by law, the certificate of incorporation, these bylaws or the rules of any applicable stock exchange on which the corporation's securities are listed. If, however, such quorum is not present or

represented at any meeting of the stockholders, then either (i) the chairperson of the meeting or (ii) the holders of a majority of the voting power of the shares represented at the meeting and entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present or represented. At such adjourned meeting at which a quorum is present or represented, any business may be transacted that might have been transacted at the original meeting.

## 2.8 ADJOURNED MEETING; NOTICE

Any stockholders' meeting, annual or special, whether or not a quorum is present, may be adjourned from time to time by (i) the chairperson of the meeting or (ii) the stockholders by the vote of the holders of a majority of the shares represented at that meeting and entitled to vote thereat, either in person or by proxy.

Unless these bylaws otherwise require, when a meeting is adjourned to another time or place (including an adjournment taken to address a technical failure to convene or continue a meeting using remote communication), notice need not be given of the adjourned meeting if the time, place, if any, thereof, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are (i) announced at the meeting at which the adjournment is taken, (ii) displayed, during the time scheduled for the meeting, on the same electronic network used to enable stockholders and proxy holders to participate in the meeting by means of remote communication or (iii) set forth in the notice of meeting given in accordance with Section 222(a) of the General Corporation Law of Delaware. At the adjourned meeting the corporation may transact any business that might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. If after the adjournment a new record date for stockholders entitled to vote is fixed for the adjourned meeting, the board of directors shall fix a new record date for notice of such adjourned meeting in accordance with Section 213(a) of the General Corporation Law of Delaware and Section 2.12 of these bylaws, and shall give notice of the adjourned meeting to each stockholder of record entitled to vote at such adjourned meeting as of the record date fixed for notice of such adjourned meeting.

## 2.9 VOTING

The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.12 of these bylaws, subject to the provisions of Sections 217 and 218 of the General Corporation Law of Delaware (relating to voting rights of fiduciaries, pledgors and joint owners, and to voting trusts and other voting agreements).

Except as may be otherwise provided in the certificate of incorporation, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder as of the applicable record date that has voting power upon the matter in question. Any stockholder entitled to vote on any matter may vote part of the shares in favor of the proposal and refrain from voting the

remaining shares or, except when the matter is the election of directors, may vote them against the proposal; but, if the stockholder fails to specify the number of shares which the stockholder is voting affirmatively, it will be conclusively presumed that the stockholder's approving vote is with respect to all shares which the stockholder is entitled to vote.

Except as otherwise provided by law, the certificate of incorporation or these bylaws, or the rules of the stock exchange on which the corporation's securities are listed, in all matters other than the election of directors, the affirmative vote of the holders of a majority of the voting power of the capital stock present in person or represented by proxy and entitled to vote on the subject matter shall decide any question brought before such meeting.

Except as otherwise required by law, the certificate of incorporation or these bylaws, directors shall be elected by the affirmative vote of the majority of the votes cast by the shares represented and entitled to vote at such meeting for the election of directors at which a quorum is present; provided, however, that if the Board of Directors determines that the number of nominees exceeds the number of directors to be elected at such meeting (a "Contested Election"), and the Board of Directors has not rescinded such determination by the date that is ten (10) calendar days in advance of the date the corporation files its definitive proxy statement (regardless of whether thereafter revised or supplemented) for such meeting with the Securities and Exchange Commission, each of the directors to be elected at such meeting shall be elected by the affirmative vote of a plurality of the votes cast by the shares represented and entitled to vote at such meeting with respect to the election of such director. For purposes of this Section 2.9, a "majority of votes cast" means that the number of votes cast "for" a candidate for director exceeds the number of votes cast "against" that director (with "abstentions" and "broker non-votes" not counted as votes cast as either "for" or "against" such director's election). In an election other than a Contested Election, stockholders will be given the choice to cast votes "for" or "against" the election of directors or to "abstain" from such vote and shall not have the ability to cast any other vote with respect to such election of directors. In a Contested Election, stockholders will be given the choice to cast "for" or "withhold" votes for the election of directors and shall not have the ability to cast any other vote with respect to such election of directors.

Except as otherwise provided by law, the certificate of incorporation or these bylaws, or the rules of the stock exchange on which the corporation's securities are listed, where a separate vote by a class or series or classes or series is required in all matters other than the election of directors, the affirmative vote of the holders of a majority of the voting power of such class or series or classes or series present in person or represented by proxy and entitled to vote on the subject matter shall decide any question brought before such meeting.

#### 2.10 WAIVER OF NOTICE; CONSENT

Whenever notice is required to be given under any provision of the General Corporation Law of Delaware, the certificate of incorporation or these bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to

notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the certificate of incorporation or these bylaws. Attendance by a person at a meeting shall also constitute a waiver of notice of and presence at that meeting, except when the person objects at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Attendance at a meeting is not a waiver of any right to object to the consideration of matters required by law to be included in the notice of the meeting but not so included, if that objection is expressly made at the meeting.

## 2.11 STOCKHOLDER ACTION BY WRITTEN CONSENT WITHOUT A MEETING

(a) Unless otherwise provided in the certificate of incorporation, any action required or permitted to be taken at any annual or special meeting of stockholders may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing setting forth the action so taken shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Such consents shall be delivered to the corporation by delivery to its registered office in the state of Delaware, its principal place of business, or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to a corporation's registered office shall be by hand or by certified or registered mail, return receipt requested.

(b) In order that the corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the board of directors, and which date shall not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the board of directors. Any stockholder of record seeking to have the stockholders authorize or take corporate action by written consent shall, by written notice to the secretary, request the board of directors to fix a record date for such purpose. The board of directors may fix a record date for such purpose which shall be no more than ten (10) days after the date on which the resolution fixing the record date is adopted by the board of directors and shall not precede the date such resolution is adopted. If no record date has been fixed by the board of directors within ten (10) days of the date on which such a request is received, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the board of directors is required by applicable law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the corporation in the manner described in Section 2.11(a). If no record date has been fixed by the board of directors and prior action by the board of directors is required by law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the board of directors adopts the resolution taking such prior action.

## 2.12 RECORD DATE FOR STOCKHOLDER NOTICE; VOTING

For purposes of determining the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the board of directors and which record date shall not be more than 60 nor less than 10 days before the date of such meeting. If the board of directors so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the board of directors determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination.

If no record date is fixed by the board of directors, the record date for determining stockholders entitled to notice of and to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the board of directors may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance with the provisions of Section 213 of the General Corporation Law of Delaware and this Section 2.12 at the adjourned meeting.

In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the board of directors adopts the resolution relating thereto.

## 2.13 PROXIES

Each stockholder entitled to vote at a meeting of stockholders, or such stockholder's authorized officer, director, employee or agent, may authorize another person or persons to act for such stockholder by proxy authorized by a document or by a transmission permitted by law filed in accordance with the procedure established for the meeting, but no such proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period. The authorization of a person to act as a proxy may be documented, signed and delivered in accordance with Section 116 of the General Corporation Law of Delaware; provided that such authorization shall set forth, or be delivered with information enabling the corporation to determine, the identity of the stockholder granting such authorization. The revocability of a proxy that states on its face that it



is irrevocable shall be governed by the provisions of Section 212(e) of the General Corporation Law of Delaware.

#### 2.14 ORGANIZATION

The chairperson of any meeting of stockholders shall be designated by the board of directors, and shall call the meeting of the stockholders to order. In the absence of such designation, the president, or in the absence of the president, the chairman of the board, or in their absence, any other executive officer of the corporation shall act as chairperson for such meeting, and in the absence of all such persons, the stockholders shall appoint a chairperson for such meeting. The chairperson of any meeting of stockholders shall determine the order of business and the procedures at the meeting, including such matters as the regulation of the manner of voting and the conduct of business and discussion as seem to the chairperson in order. The Secretary shall act as secretary of all meetings of the stockholders, but in the absence of the Secretary at any meeting of the stockholders, the chairperson of the meeting may appoint any person to act as secretary of the meeting.

#### 2.15 LIST OF STOCKHOLDERS ENTITLED TO VOTE

The corporation shall prepare, no later than the tenth day before each meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting; provided, however, if the record date for determining the stockholders entitled to vote is less than 10 days before the meeting date, the list shall reflect the stockholders entitled to vote as of the tenth day before the meeting date, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. The corporation shall not be required to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of ten (10) days ending on the day before the meeting date: (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the corporation's principal place of business. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation.

#### 2.16 INSPECTORS OF ELECTION

Before any meeting of stockholders, the corporation may appoint an inspector or inspectors of election to act at the meeting or its adjournment. If no inspector of election is so appointed, then the chairperson of the meeting may, and on the request of any stockholder or a stockholder's proxy shall, appoint an inspector or inspectors of election to act at the meeting. If any person appointed as inspector fails to appear or fails or refuses to act, then the chairperson of the meeting may, and upon the request of any stockholder or a stockholder's proxy shall, appoint a person to fill that vacancy.

Such inspectors shall:

- (a) ascertain the number of shares outstanding and the voting power of each;

- ballots;
- (b) determine the shares represented at the meeting and the validity of proxies and ballots;
- (c) count all votes and ballots;
- (d) determine and retain for a reasonable period a record of the disposition of any challenges made to any determination by the inspectors; and
- (e) certify their determination of the number of shares represented at the meeting, and their count of all votes and ballots.

The inspectors of election shall perform their duties impartially, in good faith, to the best of their ability and as expeditiously as is practical. If there are multiple inspectors of election, the decision, act or certificate of a majority is effective in all respects as the decision, act or certificate of all. Any report or certificate made by the inspectors of election is prima facie evidence of the facts stated therein.

## ARTICLE III

### DIRECTORS

#### 3.1 POWERS

Subject to the provisions of the General Corporation Law of Delaware and to any limitations in the certificate of incorporation or these bylaws relating to action required to be approved by the stockholders or by the outstanding shares, the business and affairs of the corporation shall be managed and shall be exercised by or under the direction of the board of directors. In addition to the powers and authorities these bylaws expressly confer upon them, the board of directors may exercise all such powers of the corporation and do all such lawful acts and things as are not by the General Corporation Law of Delaware or by the certificate of incorporation or by these bylaws required to be exercised or done by the stockholders.

#### 3.2 NUMBER OF DIRECTORS

The board of directors shall consist of one or more members, each of whom shall be a natural person. Unless the certificate of incorporation fixes the number of directors, the number of directors shall be determined from time to time by resolution of a majority of the Whole Board. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

#### 3.3 ELECTION AND TERM OF OFFICE OF DIRECTORS

Except as provided in Section 3.4 of these bylaws, each director, including a director elected to fill a vacancy or newly created directorship, shall hold office until the expiration of the term for which elected and until such director's successor is elected and qualified or until such director's

earlier death, resignation or removal. Directors need not be stockholders unless so required by the certificate of incorporation or these bylaws. The certificate of incorporation or these bylaws may prescribe other qualifications for directors.

### 3.4 RESIGNATION AND VACANCIES

Any director may resign effective upon giving written notice to the chairman of the board, the president, the secretary or the board of directors, unless the notice specifies a later time for that resignation to become effective (including an effective time determined upon the happening of an event or events). A resignation that is conditioned upon the director failing to receive a specified vote for reelection as a director may provide that it is irrevocable. Unless otherwise provided in the certificate of incorporation or these bylaws, when one or more directors resign from the board of directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective.

Unless otherwise provided in the certificate of incorporation or these bylaws:

(i) Vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director.

(ii) Whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the certificate of incorporation, vacancies and newly created directorships of such class or classes or series may be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected.

Any directors chosen pursuant to this Section 3.4 shall hold office for a term expiring at the next annual meeting of stockholders and until such director's successor shall have been duly elected and qualified.

If at any time, by reason of death or resignation or other cause, the corporation should have no directors in office, then any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of stockholders in accordance with the provisions of the certificate of incorporation or these bylaws, or may apply to the Court of Chancery for a decree summarily ordering an election as provided in Section 211 of the General Corporation Law of Delaware.

If, at the time of filling any vacancy or any newly created directorship, the directors then in office constitute less than a majority of the Whole Board (as constituted immediately prior to any such increase), then the Court of Chancery may, upon application of any stockholder or stockholders holding at least ten percent (10%) of the total number of the shares at the time outstanding having

the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 211 of the General Corporation Law of Delaware as far as applicable.

### 3.5 REMOVAL OF DIRECTORS

Any director or the entire board of directors may be removed, with or without cause, by stockholders of the corporation in the manner specified in the certificate of incorporation and applicable law.

### 3.6 PLACE OF MEETINGS; MEETINGS BY TELEPHONE

Regular or special meetings of the board of directors may be held at any place within or outside the State of Delaware. .

Any meeting of the board of directors, regular or special, may be held by conference telephone or similar communication equipment, so long as all directors participating in the meeting can hear one another; and all such participating directors shall be deemed to be present in person at the meeting.

### 3.7 REGULAR MEETINGS

Regular meetings of the board of directors may be held without notice at such time and such place as shall from time to time be determined by the board of directors. If any regular meeting day shall fall on a legal holiday, then the meeting shall be held at the same time and place on the next succeeding full business day.

### 3.8 SPECIAL MEETINGS; NOTICE

Special meetings of the board of directors for any purpose or purposes may be called at any time by the chairman of the board of directors, the president, any vice president, the Secretary or by a majority of the Whole Board.

The person or persons authorized to call special meetings of the board of directors may fix the time and place of the meetings. Notice of the time and place of special meetings shall be delivered personally or by telephone to each director or sent by first-class mail, courier service or telegram, telecopy or other means of electronic transmission, charges prepaid, addressed to each director at that director's address as it is shown on the records of the corporation. If the notice is by mail, such notice shall be deposited in the United States mail at least four (4) days before the time of the holding of the meeting. If the notice is by courier service, telegram, overnight mail, telecopy or other means of electronic transmission, such notice shall be deemed adequately delivered when the notice is transmitted at least twenty-four (24) hours prior to the time set for such meeting. If the notice is by telephone or by hand delivery, such notice shall be deemed adequately delivered when the notice is given at least twenty-four (24) hours prior to the time set for such meeting. Any oral

notice given personally or by telephone may be communicated either to the director or to a person at the office of the director who the person giving the notice has reason to believe will promptly communicate it to the director. The notice need not specify the purpose or the place of the meeting, if the meeting is to be held at the principal executive office of the corporation.

### 3.9 QUORUM

A majority of the Whole Board shall constitute a quorum for the transaction of business, except to adjourn as provided in Section 3.11 of these bylaws. Every act or decision done or made by a majority of the directors present at a duly held meeting at which a quorum is present shall be regarded as the act of the board of directors, subject to the provisions of the certificate of incorporation and applicable law.

### 3.10 WAIVER OF NOTICE

Notice of a meeting need not be given to any director (i) who signs a waiver of notice or provides a waiver by electronic transmission, whether before or after the meeting, or (ii) who attends the meeting without protesting, prior thereto or at its commencement, the lack of notice to such directors. All such waivers shall be filed with the corporate records or made part of the minutes of the meeting. A waiver of notice need not specify the purpose of any regular or special meeting of the board of directors.

### 3.11 ADJOURNMENT

A majority of the directors present, whether or not constituting a quorum, may adjourn any meeting of the board to another time and place.

### 3.12 NOTICE OF ADJOURNMENT

Notice of the time and place of holding an adjourned meeting of the board need not be given unless the meeting is adjourned for more than twenty-four (24) hours. If the meeting is adjourned for more than twenty-four (24) hours, then notice of the time and place of the adjourned meeting shall be given before the adjourned meeting takes place, in the manner specified in Section 3.8 of these bylaws, to the directors who were not present at the time of the adjournment.

### 3.13 BOARD ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Unless otherwise restricted by the certificate of incorporation or these bylaws, (i) any action required or permitted to be taken at any meeting of the board of directors, or of any committee thereof, may be taken without a meeting if all members of the board of directors or committee, as the case may be, consent thereto in writing or by electronic transmission and (ii) a consent may be documented, signed and delivered in any manner permitted by Section 116 of the General Corporation Law of Delaware. Any person (whether or not then a director) may provide, whether through instruction to an agent or otherwise, that a consent to action will be effective at a future time (including a time determined upon the happening of an event), no later than 60 days after such

instruction is given or such provision is made and such consent shall be deemed to have been given for purposes of this Section 3.13 at such effective time so long as such person is then a director and did not revoke the consent prior to such time. Any such consent shall be revocable prior to its becoming effective. After an action is taken, the consent or consents relating thereto shall be filed with the minutes of the proceedings of the board of directors, or the committee thereof, in the same paper or electronic form as the minutes are maintained.

#### 3.14 FEES AND COMPENSATION OF DIRECTORS

Directors and members of committees may receive such compensation, if any, for their services and such reimbursement of expenses as may be fixed or determined by resolution of the board of directors or, for the avoidance of doubt, by a duly authorized committee thereof. This Section 3.14 shall not be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee or otherwise and receiving compensation for those services.

#### 3.15 APPROVAL OF LOANS TO OFFICERS

The corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the corporation or any of its subsidiaries, including any officer or employee who is a director of the corporation or any of its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the corporation. The loan, guaranty or other assistance may be with or without interest and may be unsecured, or secured in such manner as the board of directors shall approve, including, without limitation, a pledge of shares of stock of the corporation. Nothing contained in this section shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute.

#### 3.16 SOLE DIRECTOR PROVIDED BY CERTIFICATE OF INCORPORATION

In the event only one director is required by these bylaws or the certificate of incorporation, then any reference herein to notices, waivers, consents, meetings or other actions by a majority or quorum of the directors shall be deemed to refer to such notice, waiver, etc., by such sole director, who shall have all the rights and duties and shall be entitled to exercise all of the powers and shall assume all the responsibilities otherwise herein described as given to the board of directors.

### ARTICLE IV

#### COMMITTEES

##### 4.1 COMMITTEES OF DIRECTORS

The board of directors may, by resolution adopted by a majority of the Whole Board, designate one (1) or more committees, each consisting of one (1) or more directors. The board of directors may designate one (1) or more directors as alternate members of any committee, who may

replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the board of directors to act at the meeting in the place of any such absent or disqualified member. Any committee, to the extent provided in the resolution of the board of directors or in these bylaws, shall have and may exercise all the powers and authority of the board of directors, but no such committee shall have the power or authority to (a) approve or adopt, or recommend to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the General Corporation Law of Delaware to be submitted to stockholders for approval, or (b) adopt, amend or repeal any bylaw of the corporation.

#### 4.2 MEETINGS AND ACTION OF COMMITTEES

Unless otherwise specified by the board of directors, meetings and actions of committees and subcommittees shall be governed by, and held and taken in accordance with, the following provisions of Article III of these bylaws: Section 3.6 (place of meetings; meetings by telephone), Section 3.7 (regular meetings), Section 3.8 (special meetings; notice), Section 3.9 (quorum), Section 3.10 (waiver of notice), Section 3.11 (adjournment), Section 3.12 (notice of adjournment) and Section 3.13 (board action by written consent without meeting), with such changes in the context of those bylaws as are necessary to substitute the committee or subcommittee and its members for the board of directors and its members; provided, however, that the time of regular meetings of committees or subcommittees may be determined either by resolution of the board of directors or by resolution of the committee or subcommittee, that special meetings of committees or subcommittees may also be called by resolution of the board of directors or the committee or subcommittee, and that notice of special meetings of committees and subcommittees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee or subcommittee. The board of directors or a committee or subcommittee may also adopt rules for the government of any committee or subcommittee.

#### 4.3 COMMITTEE MINUTES

Each committee and subcommittee shall keep regular minutes of its meetings.

### ARTICLE V

#### OFFICERS

##### 5.1 OFFICERS

The officers of the corporation (the "Corporate Officers") shall be a president, a secretary and a chief financial officer. The corporation may also have, at the discretion of the board of directors, a chairman of the board, one or more vice presidents (however denominated), one or more assistant secretaries, one or more assistant treasurers and such other officers as may be appointed in accordance with the provisions of these bylaws. Any number of offices may be held by the same person.

## 5.2 ELECTION OF OFFICERS

The Corporate Officers, except such officers as may be appointed in accordance with the provisions of Section 5.3 or Section 5.5 of these bylaws, shall be chosen by the board of directors, subject to the rights, if any, of an officer under any contract of employment, and shall hold their respective offices for such terms as the board of directors may from time to time determine.

## 5.3 SUBORDINATE OFFICERS

The board of directors may appoint, or may empower the any Corporate Officer to appoint, such other Corporate Officers as the business of the corporation may require, each of whom shall hold office for such period, have such power and authority, and perform such duties as are provided in these bylaws or as the board of directors may from time to time determine, or, for the avoidance of doubt, any duly authorized committee or subcommittee thereof or by any Corporate Officer who has been conferred such power of determination.

The president or other officers of the corporation may from time to time designate and appoint agents of the corporation in accordance with the provisions of Section 5.12 of these bylaws.

## 5.4 REMOVAL AND RESIGNATION OF OFFICERS

Subject to the rights, if any, of a Corporate Officer under any contract of employment, any Corporate Officer may be removed, either with or without cause, by the board of directors or, for the avoidance of doubt, by any duly authorized committee or subcommittee thereof or by any Corporate Officer upon whom such power of removal has been conferred.

Any Corporate Officer may resign at any time by giving notice to the corporation, in writing or by electronic transmission. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice; and, unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the corporation under any contract to which the Corporate Officer is a party.

Any Administrative Officer designated and appointed by the president may be removed, either with or without cause, at any time by the president. Any Administrative Officer may resign at any time by giving notice, in writing or by electronic transmission, to the president or to the Secretary.

## 5.5 VACANCIES IN OFFICES

A vacancy in any office because of death, resignation, removal, disqualification or any other cause shall be filled in the manner prescribed in these bylaws for regular appointments to that office.



## 5.6 CHAIRMAN OF THE BOARD

The chairman of the board, if such an officer be elected, shall, if present, preside at meetings of the board of directors and exercise such other powers and perform such other duties as may from time to time be assigned to him by the board of directors or as may be prescribed by these bylaws. If there is no president, then the chairman of the board shall also be the chief executive officer of the corporation and shall have the powers and duties prescribed in Section 5.7 of these bylaws.

## 5.7 PRESIDENT

Subject to such supervisory powers, if any, as may be given by the board of directors to the chairman of the board, if there be such an officer, the president shall be the chief executive officer of the corporation and shall, subject to the control of the board of directors, have general supervision, direction and control of the business and the officers of the corporation. Unless otherwise specified by the board of directors, the president shall preside at all meetings of the stockholders and, in the absence or nonexistence of a chairman of the board, at all meetings of the board of directors. The president shall have the general powers and duties of management usually vested in the office of president of a corporation, and shall have such other powers and perform such other duties as may be prescribed by the board of directors or these bylaws.

## 5.8 VICE PRESIDENTS

In the absence or disability of the president, and if there is no chairman of the board, the vice presidents, if any, in order of their rank as fixed by the board of directors or, if not ranked, a vice president designated by the board of directors, shall perform all the duties of the president and when so acting shall have all the powers of, and be subject to all the restrictions upon, the president. The vice presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the board of directors, these bylaws, the president or the chairman of the board.

## 5.9 SECRETARY

The Secretary shall keep or cause to be kept, at the principal executive office of the corporation or such other place as the board of directors may direct, a book of minutes of all meetings and actions of the board of directors, committees of directors and stockholders. The minutes shall show the time and place of each meeting, whether regular or special (and, if special, how authorized and the notice given), the names of those present at directors' meetings or committee meetings, the number of shares present or represented at stockholders' meetings and the proceedings thereof.

The Secretary shall keep, or cause to be kept, at the principal executive office of the corporation or at the office of the corporation's transfer agent or registrar, as determined by resolution of the board of directors, a share register or a duplicate share register, showing the names of all stockholders and their addresses, the number and classes of shares held by each, the number

and date of certificates evidencing such shares and the number and date of cancellation of every certificate surrendered for cancellation.

The Secretary shall give, or cause to be given, notice of all meetings of the stockholders and of the board of directors required to be given by law or by these bylaws. The Secretary shall keep the seal of the corporation, if one be adopted, in safe custody and shall have such other powers and perform such other duties as may be prescribed by the board of directors or by these bylaws.

#### 5.10 CHIEF FINANCIAL OFFICER

The chief financial officer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, retained earnings and shares. The books of account shall at all reasonable times be open to inspection by any director for a purpose reasonably related to his position as a director.

The chief financial officer shall deposit all money and other valuables in the name and to the credit of the corporation with such depositories as may be designated by the board of directors. The chief financial officer shall disburse the funds of the corporation as may be ordered by the board of directors, shall render to the president and directors, whenever they request it, an account of all of the chief financial officer's transactions as chief financial officer and of the financial condition of the corporation, and shall have such other powers and perform such other duties as may be prescribed by the board of directors or these bylaws.

#### 5.11 ASSISTANT SECRETARY

The assistant secretary, if any, or, if there is more than one, the assistant secretaries in the order determined by the board of directors (or if there be no such determination, then in the order of their election) shall, in the absence of the Secretary or in the event of the Secretary's inability or refusal to act, perform the duties and exercise the powers of the secretary and shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

#### 5.12 AGENTS

Agents of the corporation may be designated and appointed by, and shall perform such duties and have such powers as from time to time may be determined by, any officer of the corporation or by the board of directors or any committee of the board of directors to assist the Corporate Officers or the directors of the corporation in the furtherance of their duties. In the performance of such duties and the exercise of such powers, however, such agents shall have limited authority to act on behalf of the corporation as the board of directors or other duly authorized person or entity shall establish, including but not limited to limitations on the dollar amount and on the scope of agreements or commitments that may be made by such agents on behalf of the corporation, which limitations may not be exceeded by such individuals or altered by the president or any other officer of the corporation without further approval by the board of directors or a duly authorized committee thereof.

### 5.13 AUTHORITY AND DUTIES OF OFFICERS

In addition to the foregoing powers, authority and duties, all officers of the corporation shall respectively have such authority and powers and perform such duties in the management of the business of the corporation as may be designated from time to time by the board of directors and, to the extent not so provided, as generally pertain to such office, subject to the control of the board of directors.

## ARTICLE VI

### INDEMNIFICATION

#### 6.1 INDEMNIFICATION OF DIRECTORS AND OFFICERS IN THIRD PARTY PROCEEDINGS

Subject to the other provisions of this Article VI, the corporation shall indemnify, to the fullest extent permitted by the General Corporation Law of Delaware, as now or hereinafter in effect, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "Proceeding") (other than an action by or in the right of the corporation) by reason of the fact that such person is or was a director or officer of the corporation, or is or was a director or officer of the corporation serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such Proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. The termination of any Proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that such person's conduct was unlawful.

#### 6.2 INDEMNIFICATION OF DIRECTORS AND OFFICERS IN ACTIONS BY OR IN THE RIGHT OF THE CORPORATION

Subject to the other provisions of this Article VI, the corporation shall indemnify, to the fullest extent permitted by the General Corporation Law of Delaware, as now or hereinafter in effect, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed Proceeding by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person is or was a director or officer of the corporation, or is or was a director or officer of the corporation serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection

with the defense or settlement of such Proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

### 6.3 SUCCESSFUL DEFENSE

To the extent that a present or former director or officer (for purposes of this Section 6.3 only, as such term is defined in Section 145(c)(1) of the General Corporation Law of Delaware) of the corporation has been successful on the merits or otherwise in defense of any Proceeding described in Section 6.1 or Section 6.2, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith. The corporation may indemnify any other person who is not a present or former director or officer of the corporation against expenses (including attorneys' fees) actually and reasonably incurred by such person to the extent such person has been successful on the merits or otherwise in defense of any Proceeding described in Section 6.1 or Section 6.2, or in defense of any claim, issue or matter therein.

### 6.4 INDEMNIFICATION OF OTHERS

Subject to the other provisions of this Article VI, the corporation shall have power to indemnify its employees and agents, or any other persons, to the extent not prohibited by the General Corporation Law of Delaware or other applicable law. The board of directors shall have the power to delegate to any person or persons identified in subsections (1) through (4) of Section 145(d) of the General Corporation Law of Delaware the determination of whether employees or agents shall be indemnified.

### 6.5 ADVANCED PAYMENT OF EXPENSES

Expenses (including attorneys' fees) actually and reasonably incurred by an officer or director of the corporation in defending any Proceeding shall be paid by the corporation in advance of the final disposition of such Proceeding upon receipt of a written request therefor (together with documentation reasonably evidencing such expenses) and an undertaking by or on behalf of the person to repay such amounts if it shall ultimately be determined that the person is not entitled to be indemnified under this Article VI or the General Corporation Law of Delaware. Such expenses (including attorneys' fees) actually and reasonably incurred by former directors and officers or other employees and agents of the corporation or by persons serving at the request of the corporation as directors, officers, employees or agents of another corporation, partnership, joint venture, trust or other enterprise may be so paid upon such terms and conditions, if any, as the corporation deems appropriate. The right to advancement of expenses shall not apply to any Proceeding (or any part of any Proceeding) for which indemnity is excluded pursuant to these bylaws, but shall apply to any

Proceeding (or any part of any Proceeding) referenced in Sections 6.6(b) or 6.6(c) prior to a determination that the person is not entitled to be indemnified by the corporation.

Notwithstanding the foregoing, unless otherwise determined pursuant to Section 6.8, no advance shall be made by the corporation to an officer of the corporation (except by reason of the fact that such officer is or was a director of the corporation, in which event this paragraph shall not apply) in any Proceeding if a determination is reasonably and promptly made (a) by a vote of the directors who are not parties to such Proceeding, even though less than a quorum, or (b) by a committee of such directors designated by the vote of the majority of such directors, even though less than a quorum, or (c) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion, that facts known to the decision-making party at the time such determination is made demonstrate clearly and convincingly that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation.

#### 6.6 LIMITATION ON INDEMNIFICATION

(a) Subject to the requirements in Section 6.3 and the General Corporation Law of Delaware, the corporation shall not be obligated to indemnify any person pursuant to this Article VI in connection with any Proceeding (or any part of any Proceeding):

(b) for which payment has actually been made to or on behalf of such person under any statute, insurance policy, indemnity provision, vote or otherwise, except with respect to any excess beyond the amount paid;

(c) for an accounting or disgorgement of profits pursuant to Section 16(b) of the 1934 Act, or similar provisions of federal, state or local statutory law or common law, if such person is held liable therefor (including pursuant to any settlement arrangements);

(d) for any reimbursement of the corporation by such person of any bonus or other incentive-based or equity-based compensation or of any profits realized by such person from the sale of securities of the corporation, in either case as required under any clawback or compensation recovery policy adopted by the corporation, applicable securities exchange and association listing requirements, including, without limitation, those adopted in accordance with Rule 10D-1 under the 1934 Act and/or the 1934 Act (including, without limitation, any such reimbursements that arise from an accounting restatement of the corporation pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"), or the payment to the corporation of profits arising from the purchase and sale by such person of securities in violation of Section 306 of the Sarbanes-Oxley Act), if such person is held liable therefor (including pursuant to any settlement arrangements);

(e) initiated by such person, including any Proceeding (or any part of any Proceeding) initiated by such person against the corporation or its directors, officers, employees, agents or other indemnitees, unless (i) the board of directors authorized the Proceeding (or the relevant part of the Proceeding) prior to its initiation, (ii) the corporation provides the

indemnification, in its sole discretion, pursuant to the powers vested in the corporation under applicable law, (iii) otherwise required to be made under Section 6.7 or (iv) otherwise required by applicable law; or

(f) if prohibited by applicable law.

#### 6.7 DETERMINATION; CLAIM

If a claim for indemnification or advancement of expenses under this Article VI is not paid in full within 90 days after receipt by the corporation of the written request therefor, the claimant shall be entitled to an adjudication by a court of competent jurisdiction of the claimant's entitlement to such indemnification or advancement of expenses. The corporation shall indemnify such person against any and all expenses that are actually and reasonably incurred by such person in connection with any action for indemnification or advancement of expenses from the corporation under this Article VI, to the extent such person is successful in such action, and to the extent not prohibited by law. In any such suit, the corporation shall, to the fullest extent not prohibited by law, have the burden of proving that the claimant is not entitled to the requested indemnification or advancement of expenses.

#### 6.8 NON-EXCLUSIVITY OF RIGHTS

The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under the certificate of incorporation or any statute, bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office. The corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advancement of expenses, to the fullest extent not prohibited by the General Corporation Law of Delaware or other applicable law.

#### 6.9 INSURANCE

The corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under the provisions of the General Corporation Law of Delaware.

## 6.10 SURVIVAL

The rights to indemnification and advancement of expenses conferred by this Article VI shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

## 6.11 EFFECT OF REPEAL OR MODIFICATION

A right to indemnification or to advancement of expenses arising under a provision of the certificate of incorporation or a bylaw shall not be eliminated or impaired by an amendment to or repeal or elimination of the certificate of incorporation or these bylaws after the occurrence of the act or omission that is the subject of the Proceeding for which indemnification or advancement of expenses is sought, unless the provision in effect at the time of such act or omission explicitly authorizes such elimination or impairment after such action or omission has occurred.

## 6.12 CERTAIN DEFINITIONS

For purposes of this Article VI, references to the “corporation” shall include, in addition to the resulting entity, any constituent company (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent entity, or is or was serving at the request of such constituent entity as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VI with respect to the resulting or surviving entity as such person would have with respect to such constituent entity if its separate existence had continued. For purposes of this Article VI, references to “other enterprises” shall include employee benefit plans; references to “fines” shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to “serving at the request of the corporation” shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner “not opposed to the best interests of the corporation” as referred to in this Article VI.

# ARTICLE VII

## RECORDS AND REPORTS

### 7.1 ANNUAL STATEMENT TO STOCKHOLDERS

The board of directors shall present at each annual meeting, and at any special meeting of the stockholders when called for by vote of the stockholders, a full and clear statement of the business and condition of the corporation.

## 7.2 REPRESENTATION OF SECURITIES OF OTHER ENTITIES

The chairman of the board, if any, the president, any vice president, the chief financial officer, the secretary or any assistant secretary of this corporation, or any other person authorized by the board of directors or the president or a vice president, is authorized to vote, represent and exercise on behalf of this corporation all rights incident to any and all shares of the stock of or other securities of, or interests in, or issued by, any other entity or entities, and all rights incident to any management authority conferred on the corporation in accordance with the governing documents of any entity or entities, standing in the name of this corporation, including the right to act by written consent. The authority herein granted may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

## 7.3 CERTIFICATION AND INSPECTION OF BYLAWS

The original or a copy of these bylaws, as amended or otherwise altered to date, certified by the Secretary, shall be kept at the corporation's principal executive office and shall be open to inspection by the stockholders of the corporation, at all reasonable times during office hours.

# ARTICLE VIII

## GENERAL MATTERS

### 8.1 CHECKS; DRAFTS; EVIDENCES OF INDEBTEDNESS

From time to time, the board of directors shall determine by resolution which person or persons may sign or endorse all checks, drafts, other orders for payment of money, notes or other evidences of indebtedness that are issued in the name of or payable to the corporation, and only the persons so authorized shall sign or endorse those instruments.

### 8.2 CORPORATE CONTRACTS AND INSTRUMENTS: HOW EXECUTED

The board of directors, except as otherwise provided in these bylaws, may authorize and empower any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the corporation; such power and authority may be general or confined to specific instances. Unless so authorized or ratified by the board of directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

### 8.3 STOCK CERTIFICATES; TRANSFER; PARTLY PAID SHARES

The shares of the corporation shall be represented by certificates, provided that the board of directors of the corporation may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to



shares represented by a certificate until such certificate is surrendered to the corporation. Unless otherwise provided by resolution of the board of directors, every holder of stock represented by shall be entitled to have a certificate signed by, or in the name of, the corporation by any two officers of the corporation representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

Certificates for shares shall be of such form and device as the board of directors may designate and shall state the name of the record holder of the shares represented thereby; its number; date of issuance; the number of shares for which it is issued; a summary statement or reference to the powers, designations, preferences or other special rights of such stock and the qualifications, limitations or restrictions of such preferences and/or rights, if any; a statement or summary of liens, if any; a conspicuous notice of restrictions upon transfer or registration of transfer, if any; a statement as to any applicable voting trust agreement; if the shares be assessable, or, if assessments are collectible by personal action, a plain statement of such facts.

Upon surrender to the Secretary or transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

The corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, or upon the books and records of the corporation in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the corporation shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

#### 8.4 SPECIAL DESIGNATION ON CERTIFICATES

If the corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the corporation shall issue to represent such class or series of stock; provided, however, that, except as otherwise provided in Section 202 of the General Corporation Law of Delaware, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the corporation shall issue to represent such class or series of stock a statement that the corporation will furnish without charge to each stockholder who so requests the powers, the designations, the preferences and the relative, participating, optional or other special

rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Within a reasonable time after the issuance or transfer of uncertificated stock, the registered owner thereof shall be given a notice, in writing or by electronic transmission, containing the information required to be set forth or stated on certificates pursuant to this Section 8.4 or Sections 151, 156, 202(a), 218(a) or 364 of the General Corporation Law of Delaware or with respect to this Section 8.4 a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Except as otherwise expressly provided by law, the rights and obligations of the holders of uncertificated stock and the rights and obligations of the holders of certificates representing stock of the same class and series shall be identical.

#### 8.5 LOST CERTIFICATES

Except as provided in this Section 8.5, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the corporation and cancelled at the same time. The board of directors may, in case any share certificate or certificate for any other security is lost, stolen or destroyed, authorize the issuance of replacement certificates on such terms and conditions as the board may require; the board may require indemnification of the corporation secured by a bond or other adequate security sufficient to protect the corporation against any claim that may be made against it, including any expense or liability, on account of the alleged loss, theft or destruction of the certificate or the issuance of the replacement certificate.

#### 8.6 TRANSFER AGENTS AND REGISTRARS

The board of directors may appoint one or more transfer agents or transfer clerks, and one or more registrars, each of which shall be an incorporated bank or trust company, either domestic or foreign, who shall be appointed at such times and places as the requirements of the corporation may necessitate and the board of directors may designate.

#### 8.7 DIVIDENDS

The board of directors, subject to any restrictions contained in the certificate of incorporation or applicable law, may declare and pay dividends upon the shares of the corporation's capital stock. Dividends may be paid in cash, in property, or in shares of the corporation's capital stock, subject to the provisions of the certificate of incorporation. The board of directors may set apart out of any of the funds of the corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve.

#### 8.8 STOCK TRANSFER AGREEMENTS

The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes or series of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes or series owned by such stockholders in any manner not prohibited by the General Corporation Law of Delaware.

## 8.9 REGISTERED STOCKHOLDERS

The corporation:

(a) shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and notices and to vote as such owner; and

(b) shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

## 8.10 CONSTRUCTION; DEFINITIONS

Unless the context requires otherwise, the general provisions, rules of construction and definitions in the General Corporation Law of Delaware shall govern the construction of these bylaws. Without limiting the generality of this provision, as used in these bylaws, the singular number includes the plural, the plural number includes the singular, and the term “person” includes both an entity and a natural person. Any reference in these bylaws to a section of the General Corporation Law of Delaware shall be deemed to refer to such section as amended from time to time and any successor provisions thereto.

## ARTICLE IX

### AMENDMENTS

The original or other bylaws of the corporation may be adopted, amended or repealed by the stockholders entitled to vote; provided, however, that the corporation may, in its certificate of incorporation, confer the power to adopt, amend or repeal bylaws upon the directors. The fact that such power has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal bylaws.

## ARTICLE X

### FORUM SELECTION

Unless the corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another State court in Delaware or the federal district court for the District of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for (a) any derivative action or proceeding brought on behalf of the corporation, (b) any action asserting a claim of breach of a fiduciary duty owed by any director, stockholder, officer or other employee of the corporation to the corporation or the corporation’s stockholders, (c) any action arising pursuant to any provision of the General Corporation Law of Delaware or the certificate of incorporation or these bylaws (as either may be amended from time to time) or (d) any action asserting a claim governed by the internal

affairs doctrine, except for, as to each of (a) through (d) above, any claim as to which such court determines that there is an indispensable party not subject to the jurisdiction of such court (and the indispensable party does not consent to the personal jurisdiction of such court within 10 days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than such court or for which such court does not have subject matter jurisdiction.

Unless the corporation consents in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended, against any person in connection with any offering of the corporation's securities, including, without limitation and for the avoidance of doubt, any auditor, underwriter, expert, control person or other defendant.

Any person or entity purchasing, holding or otherwise acquiring any interest in any security of the corporation shall be deemed to have notice of and consented to the provisions of this Article X. This provision shall be enforceable by any party to a complaint covered by the provisions of this Article X. For the avoidance of doubt, nothing contained in this Article X shall apply to any claim brought to enforce a duty or liability created by the 1934 Act or any successor thereto.

HARMONIC INC.

CERTIFICATE OF AMENDMENT OF BYLAWS

The undersigned hereby certifies that he or she is the duly elected, qualified, and acting Secretary or Assistant Secretary of Harmonic Inc., a Delaware corporation, and that the foregoing bylaws were amended and restated on May 3, 2023 by the corporation's board of directors.

IN WITNESS WHEREOF, the undersigned has hereunto set his or her hand this 3<sup>rd</sup> day of May, 2023.

/s/ Timothy C. Chu  
Secretary



Harmonic Inc.  
Certification of Principal Executive Officer  
Pursuant to Section 302 of  
The Sarbanes-Oxley Act of 2002

I, Patrick J. Harshman, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Harmonic Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant, and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report, based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 9, 2023

By: /s/ Patrick J. Harshman  
Patrick J. Harshman  
President and Chief Executive Officer

Harmonic Inc.  
Certification of Principal Financial Officer  
Pursuant to Section 302 of  
The Sarbanes-Oxley Act of 2002

I, Jeremy Rosenberg, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Harmonic Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant, and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report, based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 9, 2023

By: /s/ Jeremy Rosenberg  
Jeremy Rosenberg  
Interim Chief Financial Officer



Harmonic Inc.  
Certification of Principal Executive Officer  
Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to  
Section 906 of the Sarbanes-Oxley Act of 2002

As of the date hereof, I, Patrick J. Harshman, President and Chief Executive Officer of Harmonic Inc. (the "Company"), certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023, as filed with the Securities and Exchange Commission (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company. This written statement is being furnished to the Securities and Exchange Commission as an exhibit accompanying such Report and shall not be deemed filed pursuant to the Securities Exchange Act of 1934, as amended.

Date: May 9, 2023

/s/ Patrick J. Harshman

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Patrick J. Harshman

President and Chief Executive Officer

Harmonic Inc.  
Certification of Principal Financial Officer  
Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to  
Section 906 of the Sarbanes-Oxley Act of 2002

As of the date hereof, I, Jeremy Rosenberg, Interim Chief Financial Officer of Harmonic Inc. (the "Company"), certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023, as filed with the Securities and Exchange Commission (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company. This written statement is being furnished to the Securities and Exchange Commission as an exhibit accompanying such Report and shall not be deemed filed pursuant to the Securities Exchange Act of 1934, as amended.

Date: May 9, 2023

/s/ Jeremy Rosenberg

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Jeremy Rosenberg  
Interim Chief Financial Officer